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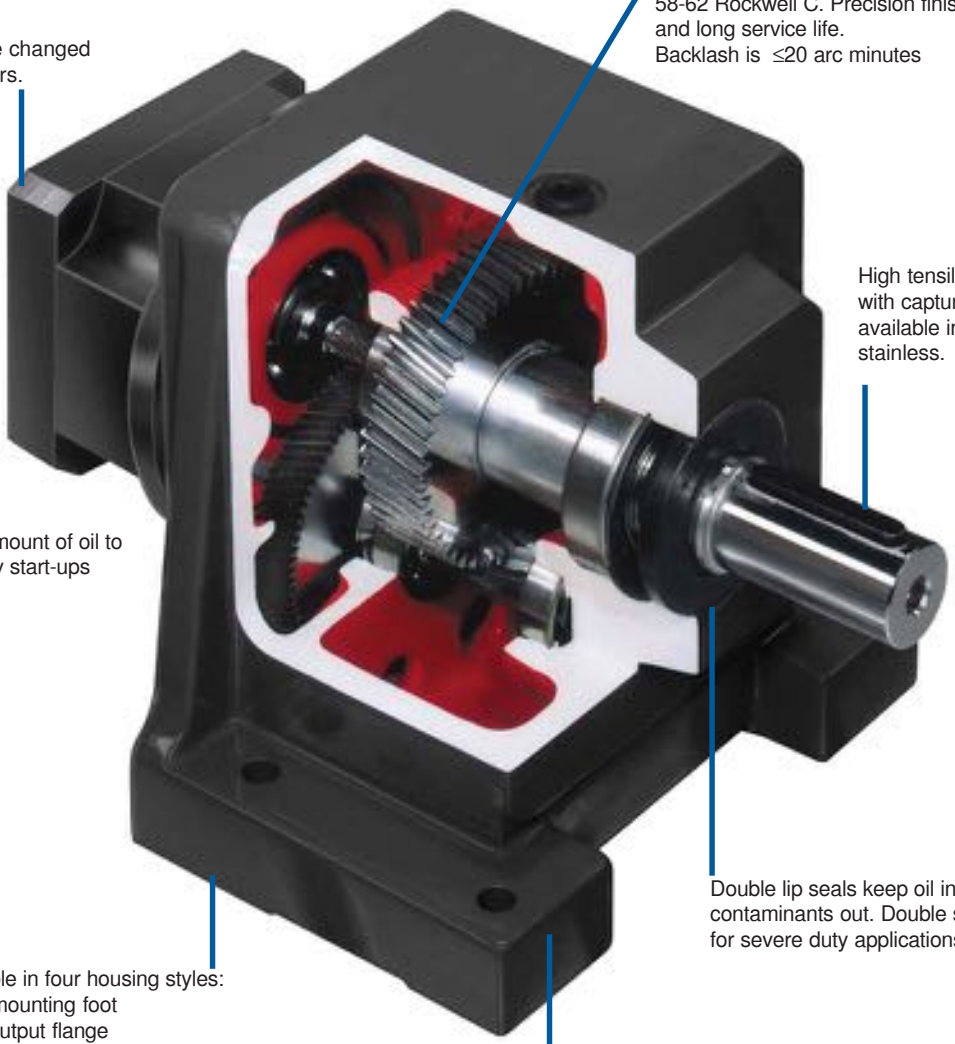
"C" Series–Concentric Helical ServoFit® Modular System

These versatile gear drives offer you performance, durability, and economy for a wide range of applications. High efficiency helical gearing keeps motor size to a minimum while running almost silently.

Performance Specifications:

- Input RPM up to 4,500 RPM
- Nominal output torque — 97 to 62,000 in.lbs. (21-7,000 Nm)
- Reducer ratios from 2:1 to 276:1
- 5 year limited warranty (2 years on bearings, seals, etc.)
- Ambient temperature — 0°C to +40°C (104°F)
- Noise level — as low as 53 dB(A)
- ≥ 95.5% Efficiency
- Maintenance free
- Can be back driven





Motor plate can easily be changed to fit your choice of motors.

High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life.
Backlash is ≤20 arc minutes

High tensile strength shafts with captured keys available inches, metric, or stainless.

Shipped with the proper amount of oil to prevent gear damaging dry start-ups

Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

Available in four housing styles:
N-mounting foot
F-output flange
Q-square output flange
G-tapped holes

One-piece cast iron housing. Precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities to eliminate leakage problems common to drives with bolt-on output covers.

Also available in washdown, food duty, and beverage duty.
Maximum 10 working days for custom motor plates.

See web site for drawings.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous	Cyclic						Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C002 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 55 dB(A)** [3]	
C002_0020 MT10	1.997	1480/741	3,500	3,000	6,000	20	1.3	7	0.8	184	21	184	21	230	26
C002_0020 MT20	1.997	1480/741	3,500	3,000	5,000	20	1.9	7	0.8	272	31	346	39	433	49
C002_0028 MT10	2.769	36/13	3,500	3,000	6,000	20	1.0	9	1.0	241	27	241	27	302	34
C002_0028 MT20	2.769	36/13	3,500	3,000	5,000	20	1.6	9	1.0	304	34	455	51	568	64
C002_0031 MT10	3.067	46/15	3,700	3,600	6,000	20	1.0	9	1.0	263	30	263	30	329	37
C002_0031 MT20	3.067	46/15	3,500	3,500	5,000	20	1.6	9	1.0	314	35	495	56	619	70
C002_0033 MT10	3.318	1702/513	3,700	3,600	6,000	20	1.0	9	1.0	284	32	284	32	356	40
C002_0033 MT20	3.318	1702/513	3,500	3,500	5,000	20	1.6	9	1.1	323	36	536	60	669	76
C002_0038 MT10	3.835	441/115	3,700	3,600	6,000	20	0.9	10	1.1	316	36	316	36	395	45
C002_0038 MT20	3.835	441/115	3,500	3,500	5,000	20	1.5	10	1.1	339	38	572	65	743	84
C002_0041 MT10	4.149	1813/437	3,700	3,600	6,000	20	0.9	10	1.1	342	39	342	39	427	48
C002_0041 MT20	4.149	1813/437	3,500	3,500	5,000	20	1.5	10	1.1	348	39	576	65	804	91
C002_0047 MT10	4.680	117/25	4,000	4,000	6,000	20	0.8	10	1.1	362	41	372	42	465	53
C002_0047 MT20	4.680	117/25	3,500	3,500	5,000	20	1.4	10	1.1	362	41	576	65	876	99
C002_0051 MT10	5.063	481/95	4,000	4,000	6,000	20	0.8	10	1.1	371	42	403	45	503	57
C002_0051 MT20	5.063	481/95	3,500	3,500	5,000	20	1.4	10	1.2	371	42	576	65	948	107
C002_0058 MT10	5.824	99/17	4,000	4,000	6,000	20	0.7	10	1.2	389	44	445	50	556	63
C002_0058 MT20	5.824	99/17	3,500	3,500	5,000	20	1.3	10	1.2	389	44	576	65	974	110
C002_0063 MT10	6.300	2035/323	4,000	4,000	6,000	20	0.7	10	1.2	399	45	481	54	601	68
C002_0063 MT20	6.300	2035/323	3,500	3,500	5,000	20	1.3	11	1.2	399	45	576	65	974	110
C002_0077 MT10	7.714	54/7	4,000	4,000	6,000	20	0.7	11	1.2	427	48	561	63	701	79
C002_0077 MT20	7.714	54/7	3,500	3,500	5,000	20	1.3	11	1.2	427	48	561	63	701	79
C002_0082 MT10	8.235	667/81	3,700	3,600	6,000	16	0.9	14	1.5	516	58	638	72	882	100
C002_0082 MT20	8.235	667/81	3,500	3,500	5,000	16	1.5	14	1.5	516	58	638	72	1,063	120
C002_0092 MT10	9.228	1495/162	3,700	3,600	6,000	16	0.9	14	1.5	531	60	576	65	989	112
C002_0092 MT20	9.228	1495/162	3,500	3,500	5,000	16	1.5	14	1.6	531	60	576	65	1,063	120
C002_0105 MT10	10.30	1421/138	3,700	3,600	6,000	16	0.8	14	1.6	531	60	638	72	1,060	120
C002_0105 MT20	10.30	1421/138	3,500	3,500	5,000	16	1.4	14	1.6	531	60	638	72	1,063	120
C002_0115 MT10	11.54	3185/276	3,700	3,600	6,000	16	0.8	14	1.6	531	60	576	65	1,063	120
C002_0115 MT20	11.54	3185/276	3,500	3,500	5,000	16	1.4	14	1.6	531	60	576	65	1,063	120
C002_0125 MT10	12.57	377/30	4,000	4,000	6,000	16	0.8	14	1.6	531	60	638	72	1,063	120
C002_0125 MT20	12.57	377/30	3,500	3,500	5,000	16	1.4	14	1.6	531	60	638	72	1,063	120
C002_0140 MT10	14.08	169/12	4,000	4,000	6,000	16	0.8	14	1.6	531	60	576	65	1,063	120
C002_0140 MT20	14.08	169/12	3,500	3,500	5,000	16	1.4	14	1.6	531	60	576	65	1,063	120
C002_0155 MT10	15.64	1595/102	4,000	4,000	6,000	16	0.7	14	1.6	531	60	638	72	1,063	120
C002_0155 MT20	15.64	1595/102	3,500	3,500	5,000	16	1.3	14	1.6	531	60	638	72	1,063	120
C002_0175 MT10	17.53	3575/204	4,000	4,000	6,000	16	0.7	14	1.6	531	60	576	65	1,063	120
C002_0175 MT20	17.53	3575/204	3,500	3,500	5,000	16	1.3	14	1.6	531	60	576	65	1,063	120
C002_0210 MT10	20.71	145/7	4,000	4,000	6,000	16	0.7	14	1.6	531	60	638	72	1,063	120
C002_0210 MT20	20.71	145/7	3,500	3,500	5,000	16	1.3	14	1.6	531	60	638	72	1,063	120
C002_0230 MT10	23.21	325/14	4,000	4,000	6,000	16	0.7	14	1.6	531	60	576	65	1,063	120
C002_0230 MT20	23.21	325/14	3,500	3,500	5,000	16	1.3	14	1.6	531	60	576	65	1,063	120

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



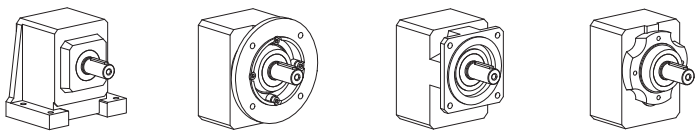
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C002 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 55 dB(A)** [3]	
C002_0250 MT10	24.97	899/36	4,000	4,000	6,000	16	0.7	14	1.6	531	60	638	72	1,063	120
C002_0250 MT20	24.97	899/36	3,500	3,500	5,000	16	1.3	14	1.6	531	60	638	72	1,063	120
C002_0280 MT10	27.99	2015/72	4,000	4,000	6,000	16	0.7	14	1.6	531	60	576	65	1,063	120
C002_0280 MT20	27.99	2015/72	3,500	3,500	5,000	16	1.3	14	1.6	531	60	576	65	1,063	120
C002_0310 MT10	31.26	2813/90	4,000	4,000	6,000	16	0.6	14	1.6	531	60	638	72	1,063	120
C002_0310 MT20	31.26	2813/90	3,500	3,500	5,000	16	1.2	14	1.6	531	60	638	72	1,063	120
C002_0350 MT10	35.03	1261/36	4,000	4,000	6,000	16	0.6	14	1.6	531	60	576	65	1,063	120
C002_0350 MT20	35.03	1261/36	3,500	3,500	5,000	16	1.2	14	1.6	531	60	576	65	1,063	120
C002_0420 MT10	41.77	3509/84	4,000	4,000	6,000	16	0.6	14	1.6	531	60	638	72	1,063	120
C002_0470 MT10	46.82	7865/168	4,000	4,000	6,000	16	0.6	14	1.6	531	60	576	65	1,063	120
C002_0500 MT10	49.94	899/18	4,000	4,000	6,000	16	0.6	14	1.6	531	60	638	72	1,048	118
C002_0560 MT10	55.97	2015/36	4,000	4,000	6,000	16	0.6	14	1.6	531	60	576	65	1,063	120
C002_0620 MT10	62.35	1247/20	4,000	4,000	6,000	16	0.6	14	1.6	531	60	638	72	1,063	120
C002_0700 MT10	69.88	559/8	4,000	4,000	6,000	16	0.6	14	1.6	531	60	576	65	1,063	120
C102 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 55 dB(A)** [3]	
C102_0020 MT10	2.018	1128/559	3,100	2,600	5,000	18	2.5	12	1.3	195	22	195	22	243	27
C102_0020 MT20	2.018	1128/559	3,100	2,600	5,000	18	3.1	12	1.4	547	62	763	86	1,076	121
C102_0020 MT30	2.018	1128/559	3,100	2,600	4,000	18	7.9	16	1.8	547	62	861	97	1,076	121
C102_0022 MT10	2.177	468/215	3,100	2,600	5,000	18	2.4	13	1.4	210	24	210	24	263	30
C102_0022 MT20	2.177	468/215	3,100	2,600	5,000	18	3.0	13	1.5	561	63	823	93	1,161	131
C102_0022 MT30	2.177	468/215	3,100	2,600	4,000	18	7.8	17	1.9	561	63	929	105	1,161	131
C102_0024 MT20	2.394	2303/962	3,100	2,600	5,000	18	2.7	15	1.7	579	65	905	102	1,260	142
C102_0024 MT30	2.394	2303/962	3,100	2,600	4,000	18	7.5	18	2.0	579	65	978	110	1,260	142
C102_0026 MT20	2.582	1911/740	3,100	2,600	5,000	18	2.7	16	1.8	593	67	976	110	1,359	153
C102_0026 MT30	2.582	1911/740	3,100	2,600	4,000	18	7.5	19	2.1	593	67	1,003	113	1,359	153
C102_0031 MT10	3.091	2491/806	3,600	3,100	6,000	18	1.6	17	2.0	282	32	282	32	352	40
C102_0031 MT20	3.091	2491/806	3,500	3,100	5,000	18	2.2	18	2.0	630	71	1,065	120	1,556	176
C102_0031 MT30	3.091	2491/806	3,500	3,100	4,000	18	7.0	21	2.4	630	71	1,065	120	1,556	176
C102_0033 MT10	3.334	2067/620	3,600	3,100	6,000	18	1.6	18	2.1	304	34	304	34	380	43
C102_0033 MT20	3.334	2067/620	3,500	3,100	5,000	18	2.2	19	2.1	646	73	1,092	123	1,678	189
C102_0033 MT30	3.334	2067/620	3,500	3,100	4,000	18	7.0	22	2.4	646	73	1,092	123	1,678	189
C102_0039 MT10	3.883	1363/351	3,600	3,100	6,000	18	1.3	20	2.3	342	39	342	39	427	48
C102_0039 MT20	3.883	1363/351	3,500	3,100	5,000	18	1.9	21	2.3	680	77	1,149	130	1,888	213
C102_0039 MT30	3.883	1363/351	3,500	3,100	4,000	18	6.7	23	2.6	680	77	1,149	130	1,888	213
C102_0042 MT10	4.189	377/90	3,600	3,100	6,000	18	1.3	21	2.4	369	42	369	42	461	52
C102_0042 MT20	4.189	377/90	3,500	3,100	5,000	18	1.9	22	2.4	697	79	1,152	130	1,949	220
C102_0042 MT30	4.189	377/90	3,500	3,100	4,000	18	6.7	24	2.7	697	79	1,152	130	1,949	220
C102_0047 MT10	4.658	3149/676	3,800	3,500	6,000	18	1.1	22	2.5	396	45	396	45	494	56
C102_0047 MT20	4.658	3149/676	3,500	3,500	5,000	18	1.7	22	2.5	722	82	1,152	130	1,949	220
C102_0047 MT30	4.658	3149/676	3,500	3,500	4,000	18	6.5	24	2.7	722	82	1,152	130	1,949	220

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C102 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 55 dB(A)** [3]	
C102_0050 MT10	5.025	201/40	3,800	3,500	6,000	18	1.1	23	2.6	427	48	427	48	533	60
C102_0050 MT20	5.025	201/40	3,500	3,500	5,000	18	1.7	23	2.6	741	84	1,152	130	1,949	220
C102_0050 MT30	5.025	201/40	3,500	3,500	4,000	18	6.5	25	2.8	741	84	1,152	130	1,949	220
C102_0059 MT10	5.875	47/8	3,800	3,500	6,000	18	1.0	24	2.7	480	54	480	54	600	68
C102_0059 MT20	5.875	47/8	3,500	3,500	5,000	18	1.6	24	2.7	781	88	1,152	130	1,949	220
C102_0059 MT30	5.875	47/8	3,500	3,500	4,000	18	6.4	25	2.9	781	88	1,152	130	1,949	220
C102_0063 MT10	6.338	507/80	3,800	3,500	6,000	18	1.0	24	2.7	517	58	517	58	647	73
C102_0063 MT20	6.338	507/80	3,500	3,500	5,000	18	1.6	25	2.8	801	90	1,152	130	1,949	220
C102_0063 MT30	6.338	507/80	3,500	3,500	4,000	18	6.4	26	2.9	801	90	1,152	130	1,949	220
C102_0078 MT10	7.796	3243/416	4,000	3,900	6,000	18	0.8	25	2.9	602	68	602	68	752	85
C102_0078 MT20	7.796	3243/416	3,500	3,500	5,000	18	1.4	26	2.9	858	97	1,152	130	1,949	220
C102_0078 MT30	7.796	3243/416	3,500	3,500	4,000	18	6.2	26	3.0	858	97	1,152	130	1,949	220
C102_0083 MT10	8.263	1537/186	3,600	3,100	6,000	15	1.3	32	3.6	753	85	753	85	941	106
C102_0083 MT20	8.263	1537/186	3,500	3,100	5,000	15	1.9	32	3.6	1,033	117	1,222	138	2,126	240
C102_0083 MT30	8.263	1537/186	3,500	3,100	4,000	15	6.7	33	3.7	1,033	117	1,222	138	2,126	240
C102_0093 MT10	9.326	3180/341	3,600	3,100	6,000	15	1.3	32	3.6	850	96	850	96	1,062	120
C102_0093 MT20	9.326	3180/341	3,500	3,100	5,000	15	1.9	32	3.7	1,063	120	1,222	138	2,126	240
C102_0093 MT30	9.326	3180/341	3,500	3,100	4,000	15	6.7	33	3.8	1,063	120	1,222	138	2,126	240
C102_0105 MT10	10.38	841/81	3,600	3,100	6,000	15	1.1	33	3.7	914	103	914	103	1,142	129
C102_0105 MT20	10.38	841/81	3,500	3,100	5,000	15	1.7	33	3.7	1,063	120	1,222	138	2,126	240
C102_0105 MT30	10.38	841/81	3,500	3,100	4,000	15	6.5	34	3.8	1,063	120	1,222	138	2,126	240
C102_0115 MT10	11.72	1160/99	3,600	3,100	6,000	15	1.1	33	3.7	1,031	116	1,031	116	1,289	146
C102_0115 MT20	11.72	1160/99	3,500	3,100	5,000	15	1.7	33	3.8	1,063	120	1,222	138	2,126	240
C102_0115 MT30	11.72	1160/99	3,500	3,100	4,000	15	6.5	34	3.8	1,063	120	1,222	138	2,126	240
C102_0125 MT10	12.46	1943/156	3,800	3,500	6,000	15	1.0	33	3.8	1,058	119	1,058	119	1,322	149
C102_0125 MT20	12.46	1943/156	3,500	3,500	5,000	15	1.6	33	3.8	1,063	120	1,222	138	2,126	240
C102_0125 MT30	12.46	1943/156	3,500	3,500	4,000	15	6.4	34	3.8	1,063	120	1,222	138	2,126	240
C102_0140 MT10	14.06	2010/143	3,800	3,500	6,000	15	1.0	34	3.8	1,063	120	1,194	135	1,492	168
C102_0140 MT20	14.06	2010/143	3,500	3,500	5,000	15	1.6	34	3.8	1,063	120	1,222	138	2,126	240
C102_0140 MT30	14.06	2010/143	3,500	3,500	4,000	15	6.4	34	3.9	1,063	120	1,222	138	2,126	240
C102_0155 MT10	15.71	377/24	3,800	3,500	6,000	15	0.9	34	3.8	1,063	120	1,222	138	1,603	181
C102_0155 MT20	15.71	377/24	3,500	3,500	5,000	15	1.5	34	3.8	1,063	120	1,222	138	2,126	240
C102_0155 MT30	15.71	377/24	3,500	3,500	4,000	15	6.3	34	3.9	1,063	120	1,222	138	2,126	240
C102_0175 MT10	17.73	195/11	3,800	3,500	6,000	15	0.9	34	3.8	1,063	120	1,222	138	1,809	204
C102_0175 MT20	17.73	195/11	3,500	3,500	5,000	15	1.5	34	3.9	1,063	120	1,222	138	2,126	240
C102_0175 MT30	17.73	195/11	3,500	3,500	4,000	15	6.3	34	3.9	1,063	120	1,222	138	2,126	240
C102_0210 MT10	20.84	667/32	4,000	3,900	6,000	15	0.8	34	3.9	1,063	120	1,222	138	2,012	227
C102_0210 MT20	20.84	667/32	3,500	3,500	5,000	15	1.4	34	3.9	1,063	120	1,222	138	2,126	240
C102_0210 MT30	20.84	667/32	3,500	3,500	4,000	15	6.2	34	3.9	1,063	120	1,222	138	2,126	240
C102_0240 MT10	23.52	1035/44	4,000	3,900	6,000	15	0.8	34	3.9	1,063	120	1,222	138	2,126	240
C102_0240 MT20	23.52	1035/44	3,500	3,500	5,000	15	1.4	34	3.9	1,063	120	1,222	138	2,126	240
C102_0240 MT30	23.52	1035/44	3,500	3,500	4,000	15	6.2	35	3.9	1,063	120	1,222	138	2,126	240

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



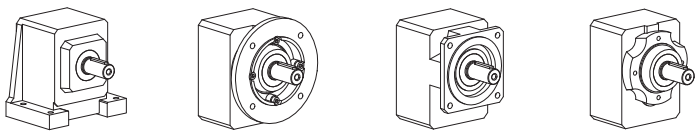
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C102 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 55 dB(A)** [3]	
C102_0250 MT10	25.13	377/15	4,000	3,900	6,000	15	0.8	34	3.9	1,063	120	1,222	138	2,126	240
C102_0250 MT20	25.13	377/15	3,500	3,500	5,000	15	1.4	34	3.9	1,063	120	1,222	138	2,126	240
C102_0250 MT30	25.13	377/15	3,500	3,500	4,000	15	6.2	35	3.9	1,063	120	1,222	138	2,126	240
C102_0280 MT10	28.36	312/11	4,000	3,900	6,000	15	0.8	35	3.9	1,063	120	1,222	138	2,126	240
C102_0280 MT20	28.36	312/11	3,500	3,500	5,000	15	1.4	35	3.9	1,063	120	1,222	138	2,126	240
C102_0280 MT30	28.36	312/11	3,500	3,500	4,000	15	6.2	35	3.9	1,063	120	1,222	138	2,126	240
C102_0310 MT10	31.07	435/14	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C102_0310 MT20	31.07	435/14	3,500	3,500	5,000	15	1.3	35	3.9	1,063	120	1,222	138	2,126	240
C102_0310 MT30	31.07	435/14	3,500	3,500	4,000	15	6.1	35	3.9	1,063	120	1,222	138	2,126	240
C102_0350 MT10	35.07	2700/77	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C102_0350 MT20	35.07	2700/77	3,500	3,500	5,000	15	1.3	35	3.9	1,063	120	1,222	138	2,126	240
C102_0350 MT30	35.07	2700/77	3,500	3,500	4,000	15	6.1	35	3.9	1,063	120	1,222	138	2,126	240
C102_0420 MT10	41.57	1247/30	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C102_0420 MT20	41.57	1247/30	3,500	3,500	5,000	15	1.3	35	3.9	1,063	120	1,222	138	2,126	240
C102_0470 MT10	46.91	516/11	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C102_0470 MT20	46.91	516/11	3,500	3,500	5,000	15	1.3	35	3.9	1,063	120	1,222	138	2,126	240
C102_0500 MT10	49.94	899/18	4,000	3,900	6,000	15	0.6	35	3.9	1,063	120	1,222	138	2,089	236
C102_0560 MT10	56.36	620/11	4,000	3,900	6,000	15	0.6	35	3.9	1,063	120	1,222	138	2,126	240
C102_0620 MT10	62.43	4495/72	4,000	3,900	6,000	15	0.6	35	3.9	1,054	119	1,222	138	2,108	238
C102_0700 MT10	70.46	775/11	4,000	3,900	6,000	15	0.6	35	3.9	1,063	120	1,222	138	2,126	240
C103 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 55 dB(A)** [3]	
C103_0820 MT10	81.64	31349/384	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C103_0920 MT10	92.13	16215/176	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C103_1110 MT10	111.1	1222/11	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C103_1370 MT10	137.3	10575/77	4,000	3,900	6,000	15	0.7	35	3.9	1,063	120	1,222	138	2,126	240
C103_1840 MT10	183.7	2021/11	4,000	3,900	6,000	15	0.6	35	3.9	1,063	120	1,222	138	2,126	240
C103_2210 MT10	220.8	7285/33	4,000	3,900	6,000	15	0.6	35	3.9	1,063	120	1,222	138	2,126	240
C103_2760 MT10	275.9	36425/132	4,000	3,900	6,000	15	0.6	35	3.9	1,063	120	1,222	138	2,126	240
C202 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 53 dB(A)** [3]	
C202_0020 MT20	2.009	432/215	3,000	2,600	4,500	17	5.1	15	1.7	690	78	760	86	1,114	126
C202_0020 MT30	2.009	432/215	3,000	2,600	4,000	17	9.9	21	2.4	834	94	1,408	159	2,874	324
C202_0022 MT20	2.184	2160/989	3,000	2,600	4,500	17	4.9	17	2.0	751	85	826	93	1,211	137
C202_0022 MT30	2.184	2160/989	3,000	2,600	4,000	17	9.7	23	2.6	857	97	1,448	163	3,100	350
C202_0025 MT20	2.475	99/40	3,000	2,600	4,500	17	4.1	20	2.3	851	96	936	106	1,328	150
C202_0025 MT30	2.475	99/40	3,000	2,600	4,000	17	8.9	27	3.0	894	101	1,062	120	1,328	150
C202_0027 MT20	2.690	495/184	3,000	2,600	4,500	17	4.0	23	2.5	919	104	1,017	115	1,443	163
C202_0027 MT30	2.690	495/184	3,000	2,600	4,000	17	8.8	29	3.3	919	104	1,155	130	1,443	163
C202_0031 MT20	3.103	90/29	3,500	3,100	5,000	17	3.3	26	3.0	964	109	1,173	132	1,618	183
C202_0031 MT30	3.103	90/29	3,500	3,100	4,000	17	8.1	33	3.7	964	109	1,295	146	1,618	183

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Acceleration		Peak [2]	
			Continuous		Cyclic					$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C202 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 53 dB(A)** [3]	
C202_0034 MT20	3.373	2250/667	3,500	3,100	5,000	17	3.2	29	3.2	991	112	1,275	144	1,759	199
C202_0034 MT30	3.373	2250/667	3,500	3,100	4,000	17	8.0	35	3.9	991	112	1,407	159	1,759	199
C202_0039 MT20	3.888	486/125	3,500	3,100	5,000	17	2.7	32	3.6	1,039	117	1,470	166	1,954	221
C202_0039 MT30	3.888	486/125	3,500	3,100	4,000	17	7.5	38	4.3	1,039	117	1,563	176	1,954	221
C202_0042 MT20	4.226	486/115	3,500	3,100	5,000	17	2.6	34	3.9	1,068	121	1,598	180	2,124	240
C202_0042 MT30	4.226	486/115	3,500	3,100	4,000	17	7.4	40	4.5	1,068	121	1,699	192	2,124	240
C202_0047 MT20	4.667	14/3	3,500	3,500	5,000	17	2.3	37	4.1	1,104	125	1,764	199	2,261	255
C202_0047 MT30	4.667	14/3	3,500	3,500	4,000	17	7.1	42	4.7	1,104	125	1,772	200	2,261	255
C202_0051 MT20	5.072	350/69	3,500	3,500	5,000	17	2.3	39	4.4	1,135	128	1,772	200	2,457	277
C202_0051 MT30	5.072	350/69	3,500	3,500	4,000	17	7.1	43	4.9	1,135	128	1,772	200	2,457	277
C202_0058 MT10	5.791	666/115	3,700	3,500	5,500	17	1.4	40	4.5	488	55	488	55	610	69
C202_0058 MT20	5.791	666/115	3,500	3,500	5,000	17	2.0	41	4.7	1,186	134	1,772	200	2,696	304
C202_0058 MT30	5.791	666/115	3,500	3,500	4,000	17	6.8	45	5.1	1,186	134	1,772	200	2,696	304
C202_0063 MT10	6.295	3330/529	3,700	3,500	5,500	17	1.4	42	4.7	530	60	530	60	663	75
C202_0063 MT20	6.295	3330/529	3,500	3,500	5,000	17	2.0	43	4.8	1,220	138	1,772	200	2,930	331
C202_0063 MT30	6.295	3330/529	3,500	3,500	4,000	17	6.8	46	5.2	1,220	138	1,772	200	2,930	331
C202_0078 MT10	7.800	39/5	4,000	3,900	6,000	17	1.1	45	5.1	618	70	618	70	772	87
C202_0078 MT20	7.800	39/5	3,500	3,500	5,000	17	1.7	46	5.2	1,310	148	1,772	200	3,100	350
C202_0078 MT30	7.800	39/5	3,500	3,500	4,000	17	6.5	48	5.5	1,310	148	1,772	200	3,100	350
C202_0082 MT20	8.190	475/58	3,500	3,100	5,000	14	2.7	61	6.9	1,692	191	2,037	230	3,543	400
C202_0082 MT30	8.190	475/58	3,500	3,100	4,000	14	7.5	65	7.4	1,692	191	2,037	230	3,543	400
C202_0094 MT20	9.387	2450/261	3,500	3,100	5,000	14	2.7	64	7.2	1,771	200	2,037	230	3,543	400
C202_0094 MT30	9.387	2450/261	3,500	3,100	4,000	14	7.5	67	7.6	1,771	200	2,037	230	3,543	400
C202_0105 MT20	10.26	513/50	3,500	3,100	5,000	14	2.3	65	7.3	1,772	200	2,037	230	3,543	400
C202_0105 MT30	10.26	513/50	3,500	3,100	4,000	14	7.1	68	7.7	1,772	200	2,037	230	3,543	400
C202_0120 MT20	11.76	294/25	3,500	3,100	5,000	14	2.3	67	7.5	1,772	200	2,037	230	3,543	400
C202_0120 MT30	11.76	294/25	3,500	3,100	4,000	14	7.1	69	7.8	1,772	200	2,037	230	3,543	400
C202_0125 MT20	12.32	665/54	3,500	3,500	5,000	14	2.1	67	7.6	1,772	200	2,037	230	3,543	400
C202_0125 MT30	12.32	665/54	3,500	3,500	4,000	14	6.9	70	7.9	1,772	200	2,037	230	3,543	400
C202_0140 MT20	14.12	3430/243	3,500	3,500	5,000	14	2.0	69	7.8	1,772	200	2,037	230	3,543	400
C202_0140 MT30	14.12	3430/243	3,500	3,500	4,000	14	6.8	70	8.0	1,772	200	2,037	230	3,543	400
C202_0155 MT10	15.28	703/46	3,700	3,500	5,500	14	1.2	69	7.8	1,287	145	1,287	145	1,609	182
C202_0155 MT20	15.28	703/46	3,500	3,500	5,000	14	1.8	69	7.8	1,772	200	2,037	230	3,543	400
C202_0155 MT30	15.28	703/46	3,500	3,500	4,000	14	6.6	71	8.0	1,772	200	2,037	230	3,543	400
C202_0175 MT10	17.52	3626/207	3,700	3,500	5,500	14	1.2	70	7.9	1,476	167	1,476	167	1,844	208
C202_0175 MT20	17.52	3626/207	3,500	3,500	5,000	14	1.8	70	7.9	1,772	200	2,037	230	3,543	400
C202_0175 MT30	17.52	3626/207	3,500	3,500	4,000	14	6.6	71	8.1	1,772	200	2,037	230	3,543	400
C202_0210 MT10	20.58	247/12	4,000	3,900	6,000	14	1.0	71	8.0	1,631	184	1,631	184	2,038	230
C202_0210 MT20	20.58	247/12	3,500	3,500	5,000	14	1.6	71	8.0	1,772	200	2,037	230	3,543	400
C202_0210 MT30	20.58	247/12	3,500	3,500	4,000	14	6.4	72	8.1	1,772	200	2,037	230	3,543	400
C202_0240 MT10	23.59	637/27	4,000	3,900	6,000	14	1.0	71	8.1	1,772	200	1,869	211	2,337	264
C202_0240 MT20	23.59	637/27	3,500	3,500	5,000	14	1.6	72	8.1	1,772	200	2,037	230	3,543	400
C202_0240 MT30	23.59	637/27	3,500	3,500	4,000	14	6.4	72	8.2	1,772	200	2,037	230	3,543	400

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
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- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



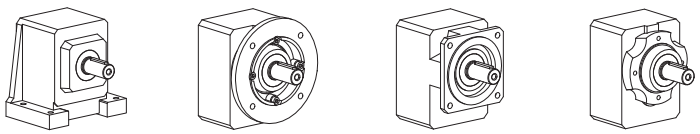
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C202 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 53 dB(A)** [3]	
C202_0250 MT10	24.64	1577/64	4,000	3,900	6,000	14	0.9	72	8.1	1,772	200	1,889	213	2,362	267
C202_0250 MT20	24.64	1577/64	3,500	3,500	5,000	14	1.5	72	8.1	1,772	200	2,037	230	3,543	400
C202_0250 MT30	24.64	1577/64	3,500	3,500	4,000	14	6.3	72	8.2	1,772	200	2,037	230	3,543	400
C202_0280 MT10	28.24	4067/144	4,000	3,900	6,000	14	0.9	72	8.1	1,772	200	2,037	230	2,707	306
C202_0280 MT20	28.24	4067/144	3,500	3,500	5,000	14	1.5	72	8.2	1,772	200	2,037	230	3,543	400
C202_0280 MT30	28.24	4067/144	3,500	3,500	4,000	14	6.3	73	8.2	1,772	200	2,037	230	3,543	400
C202_0310 MT10	30.69	399/13	4,000	3,900	6,000	14	0.8	72	8.2	1,772	200	2,037	230	2,793	315
C202_0310 MT20	30.69	399/13	3,500	3,500	5,000	14	1.4	72	8.2	1,772	200	2,037	230	3,543	400
C202_0310 MT30	30.69	399/13	3,500	3,500	4,000	14	6.2	73	8.2	1,772	200	2,037	230	3,543	400
C202_0350 MT10	35.18	1372/39	4,000	3,900	6,000	14	0.8	73	8.2	1,772	200	2,037	230	3,201	361
C202_0350 MT20	35.18	1372/39	3,500	3,500	5,000	14	1.4	73	8.2	1,772	200	2,037	230	3,543	400
C202_0350 MT30	35.18	1372/39	3,500	3,500	4,000	14	6.2	73	8.2	1,772	200	2,037	230	3,543	400
C202_0410 MT10	40.85	817/20	4,000	3,900	6,000	14	0.7	73	8.2	1,772	200	2,037	230	3,493	394
C202_0410 MT20	40.85	817/20	3,500	3,500	5,000	14	1.3	73	8.2	1,772	200	2,037	230	3,543	400
C202_0410 MT30	40.85	817/20	3,500	3,500	4,000	14	6.1	73	8.2	1,772	200	2,037	230	3,543	400
C202_0470 MT10	46.82	2107/45	4,000	3,900	6,000	14	0.7	73	8.2	1,772	200	2,037	230	3,543	400
C202_0470 MT20	46.82	2107/45	3,500	3,500	5,000	14	1.3	73	8.2	1,772	200	2,037	230	3,543	400
C202_0470 MT30	46.82	2107/45	3,500	3,500	4,000	14	6.1	73	8.3	1,772	200	2,037	230	3,543	400
C202_0490 MT10	49.23	1083/22	4,000	3,900	6,000	14	0.7	73	8.2	1,772	200	2,037	230	3,543	400
C202_0490 MT20	49.23	1083/22	3,500	3,500	5,000	14	1.3	73	8.2	1,772	200	2,037	230	3,543	400
C202_0560 MT10	56.42	1862/33	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C202_0560 MT20	56.42	1862/33	3,500	3,500	5,000	14	1.3	73	8.3	1,772	200	2,037	230	3,543	400
C202_0610 MT10	61.35	2945/48	4,000	3,900	6,000	14	0.7	73	8.3	1,658	187	1,989	225	2,518	284
C202_0700 MT10	70.32	7595/108	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	2,886	326
C203 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 53 dB(A)** [3]	
C203_0800 MT20	79.59	7163/90	3,500	3,500	5,000	14	1.4	73	8.3	1,772	200	2,037	230	3,543	400
C203_0810 MT10	80.62	11609/144	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C203_0910 MT20	91.23	36946/405	3,500	3,500	5,000	14	1.4	73	8.3	1,772	200	2,037	230	3,543	400
C203_0920 MT10	92.40	29939/324	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C203_1090 MT20	109.2	117943/1080	3,500	3,500	5,000	14	1.4	73	8.3	1,772	200	2,037	230	3,543	400
C203_1110 MT10	110.6	191149/1728	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C203_1360 MT20	136.0	79576/585	3,500	3,500	5,000	14	1.4	73	8.3	1,772	200	2,037	230	3,543	400
C203_1380 MT10	137.8	16121/117	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C203_1810 MT20	181.0	122206/675	3,500	3,500	5,000	14	1.4	73	8.3	1,772	200	2,037	230	3,543	400
C203_1830 MT10	183.4	99029/540	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C203_2210 MT10	221.0	43757/198	4,000	3,900	6,000	14	0.7	73	8.3	1,772	200	2,037	230	3,543	400
C203_2750 MT10	275.4	356965/1296	4,000	3,900	6,000	14	0.6	73	8.3	1,772	200	2,037	230	2,885	326

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous	Cyclic						Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1	C_2							
							$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C302 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 53 dB(A)** [3]	
C302_0020 MT20	2.020	608/301	2,700	2,300	4,000	16	8.2	16	1.8	694	78	764	86	1,159	131
C302_0020 MT30	2.020	608/301	2,700	2,300	4,000	16	13.0	23	2.6	1,367	154	1,814	205	2,988	337
C302_0020 MT40	2.020	608/301	2,700	2,300	3,500	16	17.0	34	3.9	1,367	154	2,309	261	2,988	337
C302_0022 MT20	2.177	468/215	2,700	2,300	4,000	16	7.8	18	2.1	748	84	823	93	1,249	141
C302_0022 MT30	2.177	468/215	2,700	2,300	4,000	16	12.6	25	2.8	1,402	158	1,955	221	3,221	364
C302_0022 MT40	2.177	468/215	2,700	2,300	3,500	16	16.6	37	4.1	1,402	158	2,368	267	3,221	364
C302_0025 MT20	2.510	1634/651	2,700	2,300	4,000	16	6.3	22	2.5	863	97	949	107	1,398	158
C302_0025 MT30	2.510	1634/651	2,700	2,300	4,000	16	11.1	29	3.3	1,470	166	2,254	254	3,607	407
C302_0025 MT40	2.510	1634/651	2,700	2,300	3,500	16	15.1	41	4.6	1,470	166	2,483	280	3,607	407
C302_0027 MT20	2.705	1677/620	2,700	2,300	4,000	16	6.1	24	2.7	930	105	1,023	115	1,507	170
C302_0027 MT30	2.705	1677/620	2,700	2,300	4,000	16	10.9	32	3.6	1,507	170	2,429	274	3,887	439
C302_0027 MT40	2.705	1677/620	2,700	2,300	3,500	16	14.9	43	4.8	1,507	170	2,546	287	3,887	439
C302_0031 MT20	3.110	1045/336	3,200	2,800	4,500	16	4.8	28	3.2	1,069	121	1,176	133	1,669	188
C302_0031 MT30	3.110	1045/336	3,200	2,800	4,000	16	9.6	36	4.1	1,579	178	2,667	301	4,304	486
C302_0031 MT40	3.110	1045/336	3,000	2,800	3,500	16	13.6	46	5.2	1,579	178	2,667	301	4,304	486
C302_0034 MT20	3.352	429/128	3,200	2,800	4,500	16	4.7	31	3.5	1,152	130	1,267	143	1,798	203
C302_0034 MT30	3.352	429/128	3,200	2,800	4,000	16	9.5	38	4.3	1,618	183	2,734	309	4,639	524
C302_0034 MT40	3.352	429/128	3,000	2,800	3,500	16	13.5	48	5.4	1,618	183	2,734	309	4,639	524
C302_0039 MT20	3.878	190/49	3,200	2,800	4,500	16	3.8	35	4.0	1,333	150	1,466	166	2,012	227
C302_0039 MT30	3.878	190/49	3,200	2,800	4,000	16	8.6	42	4.8	1,699	192	2,870	324	4,872	550
C302_0039 MT40	3.878	190/49	3,000	2,800	3,500	16	12.6	51	5.8	1,699	192	2,870	324	4,872	550
C302_0042 MT20	4.179	117/28	3,200	2,800	4,500	16	3.7	38	4.3	1,436	162	1,580	178	2,169	245
C302_0042 MT30	4.179	117/28	3,200	2,800	4,000	16	8.5	44	5.0	1,742	197	2,923	330	4,872	550
C302_0042 MT40	4.179	117/28	3,000	2,800	3,500	16	12.5	52	5.9	1,742	197	2,923	330	4,872	550
C302_0047 MT20	4.675	589/126	3,500	3,100	5,000	16	3.2	41	4.6	1,552	175	1,767	200	2,334	264
C302_0047 MT30	4.675	589/126	3,500	3,100	4,000	16	8.0	47	5.3	1,808	204	2,923	330	4,872	550
C302_0047 MT40	4.675	589/126	3,000	3,000	3,500	16	12.0	54	6.1	1,808	204	2,923	330	4,872	550
C302_0050 MT20	5.038	403/80	3,500	3,100	5,000	16	3.1	43	4.9	1,672	189	1,905	215	2,515	284
C302_0050 MT30	5.038	403/80	3,500	3,100	4,000	16	7.9	49	5.5	1,854	209	2,923	330	4,872	550
C302_0050 MT40	5.038	403/80	3,000	3,000	3,500	16	11.9	55	6.2	1,854	209	2,923	330	4,872	550
C302_0059 MT20	5.859	2584/441	3,500	3,100	5,000	16	2.6	47	5.3	1,702	192	2,215	250	2,829	319
C302_0059 MT30	5.859	2584/441	3,500	3,100	4,000	16	7.4	52	5.9	1,950	220	2,923	330	4,872	550
C302_0059 MT40	5.859	2584/441	3,000	3,000	3,500	16	11.4	57	6.4	1,950	220	2,923	330	4,872	550
C302_0063 MT20	6.314	221/35	3,500	3,100	5,000	16	2.6	49	5.5	1,834	207	2,387	269	3,049	344
C302_0063 MT30	6.314	221/35	3,500	3,100	4,000	16	7.4	53	6.0	1,999	226	2,923	330	4,872	550
C302_0063 MT40	6.314	221/35	3,000	3,000	3,500	16	11.4	58	6.5	1,999	226	2,923	330	4,872	550
C302_0078 MT20	7.841	494/63	3,500	3,500	5,000	16	2.1	53	5.9	1,771	200	2,845	321	3,556	401
C302_0078 MT30	7.841	494/63	3,500	3,500	4,000	16	6.9	56	6.3	2,148	243	2,923	330	4,872	550
C302_0078 MT40	7.841	494/63	3,000	3,000	3,500	16	10.9	59	6.7	2,148	243	2,923	330	4,872	550
C302_0083 MT20	8.250	33/4	3,200	2,800	4,500	13	3.8	64	7.2	2,638	298	3,119	352	4,426	500
C302_0083 MT30	8.250	33/4	3,200	2,800	4,000	13	8.6	68	7.7	2,638	298	3,543	400	6,201	700
C302_0083 MT40	8.250	33/4	3,000	2,800	3,500	13	12.6	73	8.2	2,638	298	3,543	400	6,201	700

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



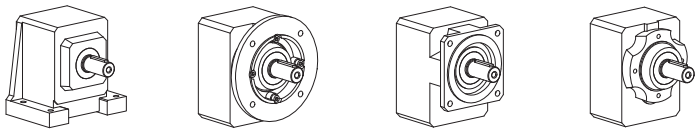
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C302 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 53 dB(A) [3]**	
C302_0093 MT20	9.310	3575/384	3,200	2,800	4,500	13	3.7	66	7.5	2,746	310	3,100	350	4,995	564
C302_0093 MT30	9.310	3575/384	3,200	2,800	4,000	13	8.5	70	7.9	2,746	310	3,100	350	6,201	700
C302_0093 MT40	9.310	3575/384	3,000	2,800	3,500	13	12.5	74	8.3	2,746	310	3,100	350	6,201	700
C302_0105 MT20	10.29	72/7	3,200	2,800	4,500	13	3.1	68	7.7	2,839	321	3,543	400	5,338	603
C302_0105 MT30	10.29	72/7	3,200	2,800	4,000	13	7.9	71	8.1	2,839	321	3,543	400	6,201	700
C302_0105 MT40	10.29	72/7	3,000	2,800	3,500	13	11.9	74	8.4	2,839	321	3,543	400	6,201	700
C302_0115 MT20	11.61	325/28	3,200	2,800	4,500	13	3.1	70	7.9	2,956	334	3,100	350	6,023	680
C302_0115 MT30	11.61	325/28	3,200	2,800	4,000	13	7.9	73	8.2	2,956	334	3,100	350	6,201	700
C302_0115 MT40	11.61	325/28	3,000	2,800	3,500	13	11.9	75	8.5	2,956	334	3,100	350	6,201	700
C302_0125 MT20	12.40	62/5	3,500	3,100	5,000	13	2.7	71	8.0	3,022	341	3,543	400	6,191	699
C302_0125 MT30	12.40	62/5	3,500	3,100	4,000	13	7.5	73	8.3	3,022	341	3,543	400	6,201	700
C302_0125 MT40	12.40	62/5	3,000	3,000	3,500	13	11.5	75	8.5	3,022	341	3,543	400	6,201	700
C302_0140 MT20	13.99	2015/144	3,500	3,100	5,000	13	2.7	72	8.1	3,100	350	3,100	350	6,201	700
C302_0140 MT30	13.99	2015/144	3,500	3,100	4,000	13	7.5	74	8.4	3,100	350	3,100	350	6,201	700
C302_0140 MT40	13.99	2015/144	3,000	3,000	3,500	13	11.5	76	8.5	3,100	350	3,100	350	6,201	700
C302_0155 MT20	15.54	544/35	3,500	3,100	5,000	13	2.3	73	8.2	3,100	350	3,543	400	6,201	700
C302_0155 MT30	15.54	544/35	3,500	3,100	4,000	13	7.1	75	8.4	3,100	350	3,543	400	6,201	700
C302_0155 MT40	15.54	544/35	3,000	3,000	3,500	13	11.1	76	8.6	3,100	350	3,543	400	6,201	700
C302_0175 MT20	17.54	1105/63	3,500	3,100	5,000	13	2.3	74	8.3	3,100	350	3,100	350	6,201	700
C302_0175 MT30	17.54	1105/63	3,500	3,100	4,000	13	7.1	75	8.5	3,100	350	3,100	350	6,201	700
C302_0175 MT40	17.54	1105/63	3,000	3,000	3,500	13	11.1	76	8.6	3,100	350	3,100	350	6,201	700
C302_0210 MT20	20.80	104/5	3,500	3,500	5,000	13	1.9	75	8.5	3,100	350	3,543	400	6,201	700
C302_0210 MT30	20.80	104/5	3,500	3,500	4,000	13	6.7	76	8.6	3,100	350	3,543	400	6,201	700
C302_0210 MT40	20.80	104/5	3,000	3,000	3,500	13	10.7	77	8.6	3,100	350	3,543	400	6,201	700
C302_0230 MT20	23.47	845/36	3,500	3,500	5,000	13	1.9	75	8.5	3,100	350	3,100	350	6,201	700
C302_0230 MT30	23.47	845/36	3,500	3,500	4,000	13	6.7	76	8.6	3,100	350	3,100	350	6,201	700
C302_0230 MT40	23.47	845/36	3,000	3,000	3,500	13	10.7	77	8.7	3,100	350	3,100	350	6,201	700
C302_0250 MT20	24.80	124/5	3,500	3,500	5,000	13	1.7	76	8.5	3,100	350	3,543	400	6,201	700
C302_0250 MT30	24.80	124/5	3,500	3,500	4,000	13	6.5	76	8.6	3,100	350	3,543	400	6,201	700
C302_0250 MT40	24.80	124/5	3,000	3,000	3,500	13	10.5	77	8.7	3,100	350	3,543	400	6,201	700
C302_0280 MT20	27.99	2015/72	3,500	3,500	5,000	13	1.7	76	8.6	3,100	350	3,100	350	6,201	700
C302_0280 MT30	27.99	2015/72	3,500	3,500	4,000	13	6.5	76	8.6	3,100	350	3,100	350	6,201	700
C302_0280 MT40	27.99	2015/72	3,000	3,000	3,500	13	10.5	77	8.7	3,100	350	3,100	350	6,201	700
C302_0310 MT20	31.04	776/25	3,500	3,500	5,000	13	1.6	76	8.6	3,100	350	3,543	400	6,201	700
C302_0310 MT30	31.04	776/25	3,500	3,500	4,000	13	6.4	77	8.7	3,100	350	3,543	400	6,201	700
C302_0310 MT40	31.04	776/25	3,000	3,000	3,500	13	10.4	77	8.7	3,100	350	3,543	400	6,201	700
C302_0350 MT20	35.03	1261/36	3,500	3,500	5,000	13	1.6	76	8.6	3,100	350	3,100	350	6,201	700
C302_0350 MT30	35.03	1261/36	3,500	3,500	4,000	13	6.4	77	8.7	3,100	350	3,100	350	6,201	700
C302_0350 MT40	35.03	1261/36	3,000	3,000	3,500	13	10.4	77	8.7	3,100	350	3,100	350	6,201	700
C302_0410 MT20	41.35	2688/65	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,543	400	6,201	700
C302_0410 MT30	41.35	2688/65	3,500	3,500	4,000	13	6.2	77	8.7	3,100	350	3,543	400	6,201	700
C302_0470 MT20	46.67	140/3	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C302_0470 MT30	46.67	140/3	3,500	3,500	4,000	13	6.2	77	8.7	3,100	350	3,100	350	6,201	700

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous		Cyclic					Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C302 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 53 dB(A)** [3]	
C302_0500 MT20	49.75	2736/55	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,543	400	6,201	700
C302_0500 MT30	49.75	2736/55	3,500	3,500	4,000	13	6.2	77	8.7	3,100	350	3,543	400	6,201	700
C302_0560 MT20	56.14	1235/22	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C302_0560 MT30	56.14	1235/22	3,500	3,500	4,000	13	6.2	77	8.7	3,100	350	3,100	350	6,201	700
C302_0620 MT20	61.92	1548/25	3,500	3,500	5,000	13	1.3	77	8.7	2,932	331	3,518	397	4,990	563
C302_0700 MT20	69.88	559/8	3,500	3,500	5,000	13	1.3	77	8.7	3,100	350	3,100	350	5,631	636
C303 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 53 dB(A)** [3]	
C303_0800 MT20	80.43	6032/75	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,543	400	6,201	700
C303_0810 MT10	81.47	1222/15	3,800	3,500	5,500	13	0.7	77	8.7	2,954	334	2,954	334	3,693	417
C303_0910 MT20	90.76	4901/54	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C303_0920 MT10	91.93	39715/432	3,800	3,500	5,500	13	0.7	77	8.7	3,100	350	3,100	350	4,167	470
C303_1080 MT20	108.2	11687/108	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C303_1100 MT10	109.6	94705/864	3,800	3,500	5,500	13	0.7	77	8.7	3,100	350	3,100	350	4,969	561
C303_1350 MT20	135.4	36569/270	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C303_1370 MT10	137.2	59267/432	3,800	3,500	5,500	13	0.7	77	8.7	3,100	350	3,100	350	6,201	700
C303_1800 MT20	180.4	1624/9	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C303_1830 MT10	182.8	1645/9	3,800	3,500	5,500	13	0.7	77	8.7	3,100	350	3,100	350	6,201	700
C303_2170 MT20	217.1	7163/33	3,500	3,500	5,000	13	1.4	77	8.7	3,100	350	3,100	350	6,201	700
C303_2200 MT10	219.9	58045/264	3,800	3,500	5,500	13	0.7	77	8.7	3,100	350	3,100	350	6,201	700
C303_2740 MT10	273.7	26273/96	3,800	3,500	5,500	13	0.7	77	8.7	3,100	350	3,100	350	5,631	636
C402 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 61 dB(A)** [3]	
C402_0020 MT30	1.968	551/280	2,500	2,100	3,500	15	23.1	28	3.1	1,606	181	1,767	199	3,029	342
C402_0020 MT40	1.968	551/280	2,500	2,100	3,500	15	27.1	49	5.5	1,971	223	2,424	274	3,029	342
C402_0022 MT30	2.221	171/77	2,500	2,100	3,500	15	21.2	34	3.8	1,813	205	1,994	225	3,419	386
C402_0022 MT40	2.221	171/77	2,500	2,100	3,500	15	25.2	57	6.4	2,052	232	2,735	309	3,419	386
C402_0025 MT30	2.456	609/248	2,500	2,100	3,500	15	18.2	39	4.4	2,005	226	2,205	249	3,668	414
C402_0025 MT40	2.456	609/248	2,500	2,100	3,500	15	22.2	64	7.2	2,122	240	2,934	331	3,668	414
C402_0028 MT30	2.771	945/341	2,500	2,100	3,500	15	17.0	47	5.3	2,209	249	2,488	281	4,138	467
C402_0028 MT40	2.771	945/341	2,500	2,100	3,500	15	21.0	73	8.3	2,209	249	3,311	374	4,138	467
C402_0031 MT30	3.099	1537/496	2,900	2,500	4,000	15	14.5	54	6.1	2,293	259	2,783	314	4,453	503
C402_0031 MT40	3.099	1537/496	2,900	2,500	3,500	15	18.5	82	9.2	2,293	259	3,562	402	4,453	503
C402_0035 MT30	3.497	2385/682	2,900	2,500	4,000	15	13.7	63	7.1	2,388	270	3,140	354	5,025	567
C402_0035 MT40	3.497	2385/682	2,900	2,500	3,500	15	17.7	91	10.2	2,388	270	4,020	454	5,025	567
C402_0039 MT20	3.894	841/216	2,900	2,500	4,000	15	7.2	53	6.0	1,338	151	1,472	166	2,088	236
C402_0039 MT30	3.894	841/216	2,900	2,500	4,000	15	12.0	71	8.0	2,475	279	3,496	395	5,385	608
C402_0039 MT40	3.894	841/216	2,900	2,500	3,500	15	16.0	98	11.1	2,475	279	4,181	472	5,385	608
C402_0044 MT20	4.394	145/33	2,900	2,500	4,000	15	6.7	62	7.0	1,510	170	1,661	188	2,356	266
C402_0044 MT30	4.394	145/33	2,900	2,500	4,000	15	11.5	80	9.0	2,576	291	3,945	445	6,077	686
C402_0044 MT40	4.394	145/33	2,900	2,500	3,500	15	15.5	106	12.0	2,576	291	4,353	491	6,077	686

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



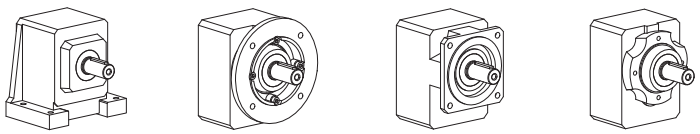
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C402 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 61 dB(A)** [3]				
C402_0047 MT20	4.682	899/192	3,300	2,800	4,500	15	5.8	66	7.5	1,609	182	1,770	200	2,438	275
C402_0047 MT30	4.682	899/192	3,300	2,800	4,000	15	10.6	84	9.5	2,632	297	4,204	475	6,287	710
C402_0047 MT40	4.682	899/192	3,000	2,800	3,500	15	14.6	110	12.4	2,632	297	4,446	502	6,287	710
C402_0053 MT20	5.284	465/88	3,300	2,800	4,500	15	5.4	75	8.5	1,816	205	1,998	226	2,751	311
C402_0053 MT30	5.284	465/88	3,300	2,800	4,000	15	10.2	93	10.5	2,740	309	4,629	523	7,096	801
C402_0053 MT40	5.284	465/88	3,000	2,800	3,500	15	14.2	117	13.2	2,740	309	4,629	523	7,096	801
C402_0059 MT20	5.891	377/64	3,300	2,800	4,500	15	4.4	84	9.4	1,927	218	2,227	251	2,930	331
C402_0059 MT30	5.891	377/64	3,300	2,800	4,000	15	9.2	101	11.4	2,841	321	4,799	542	7,529	850
C402_0059 MT40	5.891	377/64	3,000	2,800	3,500	15	13.2	122	13.8	2,841	321	4,799	542	7,529	850
C402_0066 MT20	6.648	585/88	3,300	2,800	4,500	15	4.2	92	10.4	2,174	245	2,513	284	3,307	373
C402_0066 MT30	6.648	585/88	3,300	2,800	4,000	15	9.0	109	12.3	2,958	334	4,872	550	7,529	850
C402_0066 MT40	6.648	585/88	3,000	2,800	3,500	15	13.0	127	14.4	2,958	334	4,872	550	7,529	850
C402_0078 MT20	7.816	2001/256	3,500	3,200	5,000	15	3.3	103	11.7	2,045	231	2,942	332	3,677	415
C402_0078 MT30	7.816	2001/256	3,500	3,200	4,000	15	8.1	118	13.3	3,122	352	4,872	550	7,529	850
C402_0078 MT40	7.816	2001/256	3,000	3,000	3,500	15	12.1	133	15.0	3,122	352	4,872	550	7,529	850
C402_0083 MT30	8.285	3339/403	2,900	2,500	4,000	12	11.9	146	16.5	4,432	500	5,315	600	9,744	1,100
C402_0083 MT40	8.285	3339/403	2,900	2,500	3,500	12	15.9	168	18.9	4,432	500	5,315	600	9,744	1,100
C402_0093 MT30	9.261	3445/372	2,900	2,500	4,000	12	11.8	154	17.4	4,600	519	4,872	550	9,744	1,100
C402_0093 MT40	9.261	3445/372	2,900	2,500	3,500	12	15.8	172	19.5	4,600	519	4,872	550	9,744	1,100
C402_0105 MT20	10.41	406/39	2,900	2,500	4,000	12	5.6	145	16.4	3,578	404	3,936	444	5,582	630
C402_0105 MT30	10.41	406/39	2,900	2,500	4,000	12	10.4	161	18.1	4,783	540	5,315	600	9,744	1,100
C402_0105 MT40	10.41	406/39	2,900	2,500	3,500	12	14.4	176	19.9	4,783	540	5,315	600	9,744	1,100
C402_0115 MT20	11.64	1885/162	2,900	2,500	4,000	12	5.5	153	17.3	3,999	451	4,399	497	6,239	704
C402_0115 MT30	11.64	1885/162	2,900	2,500	4,000	12	10.3	166	18.8	4,872	550	4,872	550	9,744	1,100
C402_0115 MT40	11.64	1885/162	2,900	2,500	3,500	12	14.3	179	20.3	4,872	550	4,872	550	9,744	1,100
C402_0125 MT20	12.52	651/52	3,300	2,800	4,500	12	4.6	157	17.8	4,303	486	4,733	534	6,518	736
C402_0125 MT30	12.52	651/52	3,300	2,800	4,000	12	9.4	169	19.1	4,872	550	5,315	600	9,744	1,100
C402_0125 MT40	12.52	651/52	3,000	2,800	3,500	12	13.4	181	20.5	4,872	550	5,315	600	9,744	1,100
C402_0140 MT20	13.99	2015/144	3,300	2,800	4,500	12	4.6	163	18.5	4,809	543	4,872	550	7,285	822
C402_0140 MT30	13.99	2015/144	3,300	2,800	4,000	12	9.4	174	19.6	4,872	550	4,872	550	9,744	1,100
C402_0140 MT40	13.99	2015/144	3,000	2,800	3,500	12	13.4	183	20.7	4,872	550	4,872	550	9,744	1,100
C402_0160 MT20	15.75	63/4	3,300	2,800	4,500	12	3.7	169	19.1	4,872	550	5,315	600	7,835	884
C402_0160 MT30	15.75	63/4	3,300	2,800	4,000	12	8.5	178	20.0	4,872	550	5,315	600	9,744	1,100
C402_0160 MT40	15.75	63/4	3,000	2,800	3,500	12	12.5	185	20.9	4,872	550	5,315	600	9,744	1,100
C402_0175 MT20	17.60	845/48	3,300	2,800	4,500	12	3.7	173	19.6	4,872	550	4,872	550	8,757	989
C402_0175 MT30	17.60	845/48	3,300	2,800	4,000	12	8.5	180	20.4	4,872	550	4,872	550	9,744	1,100
C402_0175 MT40	17.60	845/48	3,000	2,800	3,500	12	12.5	187	21.1	4,872	550	4,872	550	9,744	1,100
C402_0210 MT20	20.90	4347/208	3,500	3,200	5,000	12	2.9	179	20.2	4,872	550	5,315	600	9,744	1,100
C402_0210 MT30	20.90	4347/208	3,500	3,200	4,000	12	7.7	184	20.8	4,872	550	5,315	600	9,744	1,100
C402_0210 MT40	20.90	4347/208	3,000	3,000	3,500	12	11.7	189	21.3	4,872	550	5,315	600	9,744	1,100
C402_0230 MT20	23.36	1495/64	3,500	3,200	5,000	12	2.9	181	20.5	4,872	550	4,872	550	9,744	1,100
C402_0230 MT30	23.36	1495/64	3,500	3,200	4,000	12	7.7	186	21.0	4,872	550	4,872	550	9,744	1,100
C402_0230 MT40	23.36	1495/64	3,000	3,000	3,500	12	11.7	190	21.4	4,872	550	4,872	550	9,744	1,100

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.

See web site for drawings.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous		Cyclic					Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C402 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 61 dB(A)** [3]	
C402_0250 MT20	24.92	324/13	3,500	3,200	5,000	12	2.5	183	20.6	4,872	550	5,315	600	9,744	1,100
C402_0250 MT30	24.92	324/13	3,500	3,200	4,000	12	7.3	187	21.1	4,872	550	5,315	600	9,744	1,100
C402_0250 MT40	24.92	324/13	3,000	3,000	3,500	12	11.3	190	21.5	4,872	550	5,315	600	9,744	1,100
C402_0280 MT20	27.86	195/7	3,500	3,200	5,000	12	2.5	185	20.9	4,872	550	4,872	550	9,744	1,100
C402_0280 MT30	27.86	195/7	3,500	3,200	4,000	12	7.3	188	21.2	4,872	550	4,872	550	9,744	1,100
C402_0280 MT40	27.86	195/7	3,000	3,000	3,500	12	11.3	191	21.5	4,872	550	4,872	550	9,744	1,100
C402_0310 MT20	31.15	405/13	3,500	3,200	5,000	12	2.1	186	21.0	4,872	550	5,315	600	9,744	1,100
C402_0310 MT30	31.15	405/13	3,500	3,200	4,000	12	6.9	189	21.3	4,872	550	5,315	600	9,744	1,100
C402_0310 MT40	31.15	405/13	3,000	3,000	3,500	12	10.9	191	21.6	4,872	550	5,315	600	9,744	1,100
C402_0350 MT20	34.82	975/28	3,500	3,200	5,000	12	2.1	188	21.2	4,872	550	4,872	550	9,744	1,100
C402_0350 MT30	34.82	975/28	3,500	3,200	4,000	12	6.9	190	21.4	4,872	550	4,872	550	9,744	1,100
C402_0350 MT40	34.82	975/28	3,000	3,000	3,500	12	10.9	192	21.6	4,872	550	4,872	550	9,744	1,100
C402_0420 MT20	41.75	7056/169	3,500	3,200	5,000	12	1.8	189	21.4	4,872	550	5,315	600	9,744	1,100
C402_0420 MT30	41.75	7056/169	3,500	3,200	4,000	12	6.6	191	21.5	4,872	550	5,315	600	9,744	1,100
C402_0420 MT40	41.75	7056/169	3,000	3,000	3,500	12	10.6	192	21.7	4,872	550	5,315	600	9,744	1,100
C402_0470 MT20	46.67	140/3	3,500	3,200	5,000	12	1.7	190	21.5	4,872	550	4,872	550	9,744	1,100
C402_0470 MT30	46.67	140/3	3,500	3,200	4,000	12	6.5	191	21.6	4,872	550	4,872	550	9,744	1,100
C402_0470 MT40	46.67	140/3	3,000	3,000	3,500	12	10.5	192	21.7	4,872	550	4,872	550	9,744	1,100
C402_0500 MT20	50.19	1305/26	3,500	3,200	5,000	12	1.6	191	21.5	4,872	550	5,315	600	8,313	938
C402_0500 MT30	50.19	1305/26	3,500	3,200	4,000	12	6.4	192	21.6	4,872	550	5,315	600	8,313	938
C402_0560 MT20	56.10	9425/168	3,500	3,200	5,000	12	1.6	191	21.6	4,872	550	4,872	550	9,292	1,049
C402_0560 MT30	56.10	9425/168	3,500	3,200	4,000	12	6.4	192	21.7	4,872	550	4,872	550	9,292	1,049
C402_0630 MT20	62.52	8127/130	3,500	3,200	5,000	12	1.5	192	21.6	4,440	501	5,315	600	8,879	1,002
C402_0630 MT30	62.52	8127/130	3,500	3,200	4,000	12	6.3	192	21.7	4,440	501	5,315	600	8,879	1,002
C402_0700 MT20	69.88	559/8	3,500	3,200	5,000	12	1.5	192	21.7	4,872	550	4,872	550	9,744	1,100
C402_0700 MT30	69.88	559/8	3,500	3,200	4,000	12	6.3	192	21.7	4,872	550	4,872	550	9,744	1,100
C403 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 61 dB(A)** [3]	
C403_0810 MT20	80.81	42021/520	3,500	3,200	5,000	12	1.5	192	21.7	4,872	550	5,315	600	9,744	1,100
C403_0900 MT20	90.32	8671/96	3,500	3,200	5,000	12	1.5	192	21.7	4,872	550	4,872	550	9,744	1,100
C403_1080 MT20	107.7	754/7	3,500	3,200	5,000	12	1.5	193	21.8	4,872	550	4,872	550	9,744	1,100
C403_1350 MT20	134.6	1885/14	3,500	3,200	5,000	12	1.4	193	21.8	4,872	550	4,872	550	9,744	1,100
C403_1800 MT20	180.4	1624/9	3,500	3,200	5,000	12	1.4	193	21.8	4,872	550	4,872	550	9,744	1,100
C403_2170 MT20	216.9	54665/252	3,500	3,200	5,000	12	1.4	193	21.8	4,872	550	4,872	550	9,291	1,049
C403_2700 MT20	270.2	16211/60	3,500	3,200	5,000	12	1.4	193	21.8	4,872	550	4,872	550	9,744	1,100

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



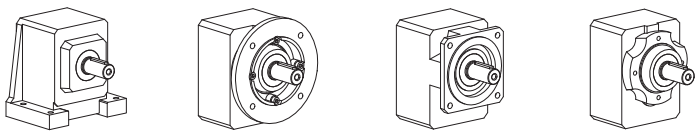
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C502 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 61 dB(A)** [3]				
C502_0020 MT30	1.976	81/41	2,400	2,000	3,000	14	36.0	29	3.3	1,613	182	1,774	200	3,142	355
C502_0020 MT40	1.976	81/41	2,400	2,000	3,000	14	40.0	52	5.9	2,514	284	2,514	284	3,142	355
C502_0020 MT50	1.976	81/41	2,400	2,000	3,000	14	50.0	103	11.6	3,060	345	4,804	542	6,005	678
C502_0022 MT30	2.247	645/287	2,400	2,000	3,000	14	33.8	36	4.0	1,834	207	2,018	228	3,573	403
C502_0022 MT40	2.247	645/287	2,400	2,000	3,000	14	37.8	62	7.0	2,859	323	2,859	323	3,573	403
C502_0022 MT50	2.247	645/287	2,400	2,000	3,000	14	47.8	114	12.9	3,193	361	5,395	609	6,828	771
C502_0025 MT30	2.450	49/20	2,400	2,000	3,000	14	27.6	41	4.6	2,000	226	2,200	248	3,784	427
C502_0025 MT40	2.450	49/20	2,400	2,000	3,000	14	31.6	70	7.9	3,027	342	3,027	342	3,784	427
C502_0025 MT50	2.450	49/20	2,400	2,000	3,000	14	41.6	122	13.8	3,287	371	5,553	627	7,231	816
C502_0028 MT30	2.787	301/108	2,400	2,000	3,000	14	26.1	50	5.6	2,275	257	2,502	283	4,305	486
C502_0028 MT40	2.787	301/108	2,400	2,000	3,000	14	30.1	81	9.2	3,431	387	3,444	389	4,305	486
C502_0028 MT50	2.787	301/108	2,400	2,000	3,000	14	40.1	133	15.0	3,431	387	5,797	654	8,226	929
C502_0031 MT30	3.077	477/155	2,800	2,400	3,500	14	21.3	58	6.5	2,512	284	2,763	312	4,595	519
C502_0031 MT40	3.077	477/155	2,800	2,400	3,500	14	25.3	91	10.2	3,546	400	3,676	415	4,595	519
C502_0031 MT50	3.077	477/155	2,500	2,400	3,000	14	35.3	140	15.8	3,546	400	3,676	415	4,595	519
C502_0035 MT30	3.501	2279/651	2,800	2,400	3,500	14	20.4	68	7.7	2,858	323	3,144	355	5,228	590
C502_0035 MT40	3.501	2279/651	2,800	2,400	3,500	14	24.4	103	11.6	3,702	418	4,183	472	5,228	590
C502_0035 MT50	3.501	2279/651	2,500	2,400	3,000	14	34.4	149	16.8	3,702	418	4,183	472	5,228	590
C502_0039 MT30	3.867	58/15	2,800	2,400	3,500	14	17.0	77	8.7	3,156	356	3,472	392	5,579	630
C502_0039 MT40	3.867	58/15	2,800	2,400	3,500	14	21.0	112	12.6	3,827	432	4,463	504	5,579	630
C502_0039 MT50	3.867	58/15	2,500	2,400	3,000	14	31.0	154	17.4	3,827	432	4,463	504	5,579	630
C502_0044 MT30	4.399	2494/567	2,800	2,400	3,500	14	16.4	89	10.1	3,591	405	3,950	446	6,346	716
C502_0044 MT40	4.399	2494/567	2,800	2,400	3,500	14	20.4	123	13.9	3,995	451	5,077	573	6,346	716
C502_0044 MT50	4.399	2494/567	2,500	2,400	3,000	14	30.4	161	18.2	3,995	451	5,077	573	6,346	716
C502_0046 MT20	4.629	162/35	3,100	2,700	4,000	14	9.4	72	8.1	1,591	180	1,750	198	2,496	282
C502_0046 MT30	4.629	162/35	3,100	2,700	4,000	14	14.2	94	10.6	3,512	396	4,156	469	6,439	727
C502_0046 MT40	4.629	162/35	3,000	2,700	3,500	14	18.2	128	14.4	4,063	459	5,151	582	6,439	727
C502_0046 MT50	4.629	162/35	2,500	2,500	3,000	14	28.2	163	18.4	4,063	459	5,151	582	6,439	727
C502_0053 MT20	5.265	258/49	3,100	2,700	4,000	14	9.0	83	9.4	1,810	204	1,990	225	2,839	321
C502_0053 MT30	5.265	258/49	3,100	2,700	4,000	14	13.8	106	12.0	3,994	451	4,727	534	7,323	827
C502_0053 MT40	5.265	258/49	3,000	2,700	3,500	14	17.8	138	15.5	4,242	479	5,859	661	7,323	827
C502_0053 MT50	5.265	258/49	2,500	2,500	3,000	14	27.8	168	19.0	4,242	479	5,859	661	7,323	827
C502_0059 MT20	5.850	117/20	3,100	2,700	4,000	14	7.1	93	10.5	2,011	227	2,212	250	3,036	343
C502_0059 MT30	5.850	117/20	3,100	2,700	4,000	14	11.9	116	13.1	3,804	429	5,253	593	7,830	884
C502_0059 MT40	5.850	117/20	3,000	2,700	3,500	14	15.9	145	16.4	4,393	496	6,264	707	7,830	884
C502_0059 MT50	5.850	117/20	2,500	2,500	3,000	14	25.9	172	19.4	4,393	496	6,264	707	7,830	884
C502_0067 MT20	6.655	559/84	3,100	2,700	4,000	14	6.8	105	11.9	2,287	258	2,516	284	3,453	390
C502_0067 MT30	6.655	559/84	3,100	2,700	4,000	14	11.6	127	14.3	4,328	489	5,975	675	8,907	1,006
C502_0067 MT40	6.655	559/84	3,000	2,700	3,500	14	15.6	153	17.3	4,586	518	7,086	800	8,907	1,006
C502_0067 MT50	6.655	559/84	2,500	2,500	3,000	14	25.6	175	19.8	4,586	518	7,086	800	8,907	1,006
C502_0078 MT20	7.763	621/80	3,400	3,000	4,500	14	5.0	119	13.5	2,405	272	2,935	331	3,810	430
C502_0078 MT30	7.763	621/80	3,400	3,000	4,000	14	9.8	139	15.7	4,039	456	6,970	787	9,826	1,109
C502_0078 MT40	7.763	621/80	3,000	3,000	3,500	14	13.8	161	18.2	4,828	545	7,086	800	9,826	1,109
C502_0078 MT50	7.763	621/80	2,500	2,500	3,000	14	23.8	178	20.1	4,828	545	7,086	800	9,826	1,109

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous	Cyclic						Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1	C_2							
							kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C502 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 61 dB(A)** [3]	
C502_0083 MT30	8.263	1537/186	2,800	2,400	3,500	12	16.9	150	17.0	6,642	750	7,419	838	12,340	1,393
C502_0083 MT40	8.263	1537/186	2,800	2,400	3,500	12	20.9	173	19.6	6,642	750	8,149	920	12,340	1,393
C502_0083 MT50	8.263	1537/186	2,500	2,400	3,000	12	30.9	191	21.6	6,642	750	8,149	920	12,340	1,393
C502_0093 MT30	9.261	3445/372	2,800	2,400	3,500	12	16.6	159	17.9	6,900	779	7,529	850	13,830	1,561
C502_0093 MT40	9.261	3445/372	2,800	2,400	3,500	12	20.6	178	20.1	6,900	779	7,529	850	13,830	1,561
C502_0093 MT50	9.261	3445/372	2,500	2,400	3,000	12	30.6	193	21.8	6,900	779	7,529	850	13,830	1,561
C502_0105 MT30	10.38	841/81	2,800	2,400	3,500	12	14.1	166	18.7	7,086	800	8,149	920	14,173	1,600
C502_0105 MT40	10.38	841/81	2,800	2,400	3,500	12	18.1	183	20.6	7,086	800	8,149	920	14,173	1,600
C502_0105 MT50	10.38	841/81	2,500	2,400	3,000	12	28.1	195	22.0	7,086	800	8,149	920	14,173	1,600
C502_0115 MT30	11.64	1885/162	2,800	2,400	3,500	12	13.9	172	19.4	7,086	800	7,529	850	14,173	1,600
C502_0115 MT40	11.64	1885/162	2,800	2,400	3,500	12	17.9	186	21.0	7,086	800	7,529	850	14,173	1,600
C502_0115 MT50	11.64	1885/162	2,500	2,400	3,000	12	27.9	196	22.1	7,086	800	7,529	850	14,173	1,600
C502_0125 MT20	12.43	87/7	3,100	2,700	4,000	12	7.4	162	18.3	4,272	482	4,699	530	6,703	757
C502_0125 MT30	12.43	87/7	3,100	2,700	4,000	12	12.2	175	19.8	7,086	800	8,149	920	14,173	1,600
C502_0125 MT40	12.43	87/7	3,000	2,700	3,500	12	16.2	188	21.2	7,086	800	8,149	920	14,173	1,600
C502_0125 MT50	12.43	87/7	2,500	2,500	3,000	12	26.2	197	22.2	7,086	800	8,149	920	14,173	1,600
C502_0140 MT20	13.93	195/14	3,100	2,700	4,000	12	7.3	169	19.0	4,787	540	5,266	594	7,512	848
C502_0140 MT30	13.93	195/14	3,100	2,700	4,000	12	12.1	180	20.3	7,086	800	7,529	850	14,173	1,600
C502_0140 MT40	13.93	195/14	3,000	2,700	3,500	12	16.1	190	21.5	7,086	800	7,529	850	14,173	1,600
C502_0140 MT50	13.93	195/14	2,500	2,500	3,000	12	26.1	197	22.3	7,086	800	7,529	850	14,173	1,600
C502_0155 MT20	15.71	377/24	3,100	2,700	4,000	12	5.8	175	19.7	5,399	609	5,939	670	8,151	920
C502_0155 MT30	15.71	377/24	3,100	2,700	4,000	12	10.6	184	20.8	7,086	800	8,149	920	14,173	1,600
C502_0155 MT40	15.71	377/24	3,000	2,700	3,500	12	14.6	193	21.7	7,086	800	8,149	920	14,173	1,600
C502_0155 MT50	15.71	377/24	2,500	2,500	3,000	12	24.6	198	22.4	7,086	800	8,149	920	14,173	1,600
C502_0175 MT20	17.60	845/48	3,100	2,700	4,000	12	5.8	179	20.3	6,050	683	6,655	751	9,135	1,031
C502_0175 MT30	17.60	845/48	3,100	2,700	4,000	12	10.6	187	21.1	7,086	800	7,529	850	14,173	1,600
C502_0175 MT40	17.60	845/48	3,000	2,700	3,500	12	14.6	194	21.9	7,086	800	7,529	850	14,173	1,600
C502_0175 MT50	17.60	845/48	2,500	2,500	3,000	12	24.6	199	22.4	7,086	800	7,529	850	14,173	1,600
C502_0210 MT20	20.84	667/32	3,400	3,000	4,500	12	4.3	185	20.9	6,458	729	7,880	890	10,229	1,155
C502_0210 MT30	20.84	667/32	3,400	3,000	4,000	12	9.1	191	21.6	7,086	800	8,149	920	14,173	1,600
C502_0210 MT40	20.84	667/32	3,000	3,000	3,500	12	13.1	196	22.1	7,086	800	8,149	920	14,173	1,600
C502_0210 MT50	20.84	667/32	2,500	2,500	3,000	12	23.1	199	22.5	7,086	800	8,149	920	14,173	1,600
C502_0230 MT20	23.36	1495/64	3,400	3,000	4,500	12	4.2	188	21.2	7,086	800	7,529	850	11,464	1,294
C502_0230 MT30	23.36	1495/64	3,400	3,000	4,000	12	9.0	193	21.8	7,086	800	7,529	850	14,173	1,600
C502_0230 MT40	23.36	1495/64	3,000	3,000	3,500	12	13.0	197	22.2	7,086	800	7,529	850	14,173	1,600
C502_0230 MT50	23.36	1495/64	2,500	2,500	3,000	12	23.0	200	22.5	7,086	800	7,529	850	14,173	1,600
C502_0250 MT20	25.07	2407/96	3,400	3,000	4,500	12	3.5	190	21.4	6,561	741	8,149	920	11,796	1,332
C502_0250 MT30	25.07	2407/96	3,400	3,000	4,000	12	8.3	194	21.9	7,086	800	8,149	920	14,173	1,600
C502_0250 MT40	25.07	2407/96	3,000	3,000	3,500	12	12.3	198	22.3	7,086	800	8,149	920	14,173	1,600
C502_0250 MT50	25.07	2407/96	2,500	2,500	3,000	12	22.3	200	22.6	7,086	800	8,149	920	14,173	1,600
C502_0280 MT20	28.10	5395/192	3,400	3,000	4,500	12	3.5	192	21.7	7,086	800	7,529	850	13,219	1,492
C502_0280 MT30	28.10	5395/192	3,400	3,000	4,000	12	8.3	195	22.1	7,086	800	7,529	850	14,173	1,600
C502_0280 MT40	28.10	5395/192	3,000	3,000	3,500	12	12.3	198	22.4	7,086	800	7,529	850	14,173	1,600
C502_0280 MT50	28.10	5395/192	2,500	2,500	3,000	12	22.3	200	22.6	7,086	800	7,529	850	14,173	1,600

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



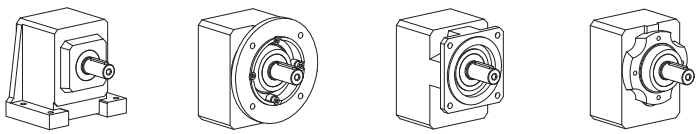
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C502 with MT TriAdapt® Motor Adapter Continued											**Noise Level ≤ 61 dB(A)** [3]				
C502_0310 MT20	31.23	406/13	3,400	3,000	4,500	12	2.8	194	21.9	6,739	761	8,149	920	14,001	1,581
C502_0310 MT30	31.23	406/13	3,400	3,000	4,000	12	7.6	196	22.2	7,086	800	8,149	920	14,001	1,581
C502_0310 MT40	31.23	406/13	3,000	3,000	3,500	12	11.6	199	22.4	7,086	800	8,149	920	14,001	1,581
C502_0350 MT20	35.00	35/1	3,400	3,000	4,500	12	2.8	195	22.0	7,086	800	7,529	850	14,173	1,600
C502_0350 MT30	35.00	35/1	3,400	3,000	4,000	12	7.6	197	22.3	7,086	800	7,529	850	14,173	1,600
C502_0350 MT40	35.00	35/1	3,000	3,000	3,500	12	11.6	199	22.5	7,086	800	7,529	850	14,173	1,600
C502_0420 MT20	41.69	667/16	3,400	3,000	4,500	12	2.2	197	22.2	7,014	792	8,149	920	14,173	1,600
C502_0420 MT30	41.69	667/16	3,400	3,000	4,000	12	7.0	198	22.4	7,086	800	8,149	920	14,173	1,600
C502_0420 MT40	41.69	667/16	3,000	3,000	3,500	12	11.0	200	22.5	7,086	800	8,149	920	14,173	1,600
C502_0470 MT20	46.72	1495/32	3,400	3,000	4,500	12	2.2	198	22.3	7,086	800	7,529	850	14,173	1,600
C502_0470 MT30	46.72	1495/32	3,400	3,000	4,000	12	7.0	199	22.5	7,086	800	7,529	850	14,173	1,600
C502_0470 MT40	46.72	1495/32	3,000	3,000	3,500	12	11.0	200	22.6	7,086	800	7,529	850	14,173	1,600
C502_0500 MT20	49.82	1943/39	3,400	3,000	4,500	12	1.9	198	22.4	7,086	800	8,149	920	14,173	1,600
C502_0500 MT30	49.82	1943/39	3,400	3,000	4,000	12	6.7	199	22.5	7,086	800	8,149	920	14,173	1,600
C502_0500 MT40	49.82	1943/39	3,000	3,000	3,500	12	10.7	200	22.6	7,086	800	8,149	920	14,173	1,600
C502_0560 MT20	55.83	335/6	3,400	3,000	4,500	12	1.9	199	22.4	7,086	800	7,529	850	14,173	1,600
C502_0560 MT30	55.83	335/6	3,400	3,000	4,000	12	6.7	200	22.5	7,086	800	7,529	850	14,173	1,600
C502_0560 MT40	55.83	335/6	3,000	3,000	3,500	12	10.7	200	22.6	7,086	800	7,529	850	14,173	1,600
C502_0620 MT20	62.43	4495/72	3,400	3,000	4,500	12	1.7	199	22.5	6,325	714	7,590	857	10,212	1,153
C502_0620 MT30	62.43	4495/72	3,400	3,000	4,000	12	6.5	200	22.6	6,325	714	7,590	857	10,212	1,153
C502_0700 MT20	69.97	10075/144	3,400	3,000	4,500	12	1.7	199	22.5	7,086	800	7,529	850	11,444	1,292
C502_0700 MT30	69.97	10075/144	3,400	3,000	4,000	12	6.5	200	22.6	7,086	800	7,529	850	11,444	1,292
C503 with MT TriAdapt® Motor Adapter											**Noise Level ≤ 61 dB(A)** [3]				
C503_0810 MT20	80.60	19343/240	3,400	3,000	4,500	12	1.6	200	22.6	7,086	800	8,149	920	10,228	1,155
C503_0900 MT20	90.32	8671/96	3,400	3,000	4,500	12	1.6	200	22.6	7,086	800	7,529	850	11,463	1,294
C503_1090 MT20	108.6	31291/288	3,400	3,000	4,500	12	1.5	200	22.6	7,086	800	7,529	850	13,218	1,492
C503_1350 MT20	135.3	406/3	3,400	3,000	4,500	12	1.5	201	22.6	7,086	800	7,529	850	14,173	1,600
C503_1810 MT20	180.6	8671/48	3,400	3,000	4,500	12	1.4	201	22.7	7,086	800	7,529	850	14,173	1,600
C503_2160 MT20	215.9	1943/9	3,400	3,000	4,500	12	1.4	201	22.7	7,086	800	7,529	850	14,173	1,600
C503_2710 MT20	270.5	58435/216	3,400	3,000	4,500	12	1.4	201	22.7	7,086	800	7,529	850	11,443	1,292
C612 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 61 dB(A)** [3]				
C612_0042 MT30	4.184	2745/656	2,300	1,900	2,800	10	52.9	124	14.0	3,415	386	3,757	424	6,831	771
C612_0042 MT40	4.184	2745/656	2,300	1,900	2,800	10	56.9	217	24.5	5,522	623	5,522	623	6,902	779
C612_0042 MT50	4.184	2745/656	2,300	1,900	2,800	10	66.9	398	45.0	7,293	823	10,552	1,191	13,190	1,489
C612_0051 MT30	5.083	61/12	2,300	1,900	2,800	10	42.1	168	19.0	4,149	468	4,564	515	8,147	920
C612_0051 MT40	5.083	61/12	2,300	1,900	2,800	10	46.1	277	31.3	6,518	736	6,518	736	8,147	920
C612_0051 MT50	5.083	61/12	2,300	1,900	2,800	10	56.1	456	51.5	7,782	878	12,455	1,406	15,569	1,758
C612_0065 MT30	6.518	3233/496	2,700	2,300	3,300	10	31.7	238	26.8	5,320	601	5,852	661	10,064	1,136
C612_0065 MT40	6.518	3233/496	2,700	2,300	3,300	10	35.7	358	40.4	8,051	909	8,051	909	10,064	1,136
C612_0065 MT50	6.518	3233/496	2,500	2,300	3,000	10	45.7	518	58.5	8,454	954	14,282	1,612	19,232	2,171

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C612 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 61 dB(A)** [3]	
C612_0071 MT30	7.111	64/9	2,300	1,900	2,800	10	38.4	265	29.9	5,804	655	6,385	721	11,398	1,287
C612_0071 MT40	7.111	64/9	2,300	1,900	2,800	10	42.4	386	43.6	8,703	983	9,118	1,029	11,398	1,287
C612_0071 MT50	7.111	64/9	2,300	1,900	2,800	10	52.4	536	60.6	8,703	983	12,224	1,380	21,780	2,459
C612_0082 MT30	8.190	1769/216	2,700	2,300	3,300	10	25.0	310	35.0	6,685	755	7,354	830	12,217	1,379
C612_0082 MT40	8.190	1769/216	2,700	2,300	3,300	10	29.0	430	48.5	9,123	1,030	9,773	1,103	12,217	1,379
C612_0082 MT50	8.190	1769/216	2,500	2,300	3,000	10	39.0	562	63.4	9,123	1,030	14,616	1,650	23,344	2,635
C612_0091 MT30	9.118	848/93	2,700	2,300	3,300	10	29.4	346	39.0	7,443	840	8,187	924	14,079	1,589
C612_0091 MT40	9.118	848/93	2,700	2,300	3,300	10	33.4	460	52.0	9,455	1,067	11,263	1,272	14,079	1,589
C612_0091 MT50	9.118	848/93	2,500	2,300	3,000	10	43.4	578	65.3	9,455	1,067	12,224	1,380	23,031	2,600
C612_0100 MT30	10.11	3721/368	3,000	2,600	3,500	10	20.7	379	42.8	8,253	932	9,079	1,025	14,489	1,636
C612_0100 MT40	10.11	3721/368	3,000	2,600	3,500	10	24.7	488	55.1	9,787	1,105	11,592	1,309	14,489	1,636
C612_0100 MT50	10.11	3721/368	2,500	2,500	3,000	10	34.7	591	66.8	9,787	1,105	14,616	1,650	25,688	2,900
C612_0115 MT30	11.46	928/81	2,700	2,300	3,300	10	23.6	418	47.2	9,352	1,056	10,287	1,161	17,090	1,929
C612_0115 MT40	11.46	928/81	2,700	2,300	3,300	10	27.6	517	58.4	10,203	1,152	12,224	1,380	17,090	1,929
C612_0115 MT50	11.46	928/81	2,500	2,300	3,000	10	37.6	605	68.3	10,203	1,152	12,224	1,380	23,031	2,600
C612_0125 MT30	12.58	2013/160	3,000	2,600	3,500	10	16.7	446	50.3	9,091	1,026	11,296	1,275	17,288	1,952
C612_0125 MT40	12.58	2013/160	3,000	2,600	3,500	10	20.7	537	60.6	10,526	1,188	13,830	1,561	17,288	1,952
C612_0125 MT50	12.58	2013/160	2,500	2,500	3,000	10	30.7	613	69.2	10,526	1,188	14,616	1,650	25,688	2,900
C612_0140 MT30	14.15	976/69	3,000	2,600	3,500	10	19.7	478	54.0	10,945	1,236	12,224	1,380	20,270	2,288
C612_0140 MT40	14.15	976/69	3,000	2,600	3,500	10	23.7	558	63.0	10,945	1,236	12,224	1,380	20,270	2,288
C612_0140 MT50	14.15	976/69	2,500	2,500	3,000	10	33.7	622	70.2	10,945	1,236	12,224	1,380	23,031	2,600
C612_0160 MT30	16.20	1037/64	3,200	2,900	4,000	10	13.3	511	57.7	9,634	1,088	14,549	1,642	21,206	2,394
C612_0160 MT40	16.20	1037/64	3,000	2,900	3,500	10	17.3	579	65.3	11,452	1,293	14,616	1,650	21,206	2,394
C612_0160 MT50	16.20	1037/64	2,500	2,500	3,000	10	27.3	630	71.1	11,452	1,293	14,616	1,650	25,688	2,900
C612_0175 MT30	17.60	88/5	3,000	2,600	3,500	10	16.1	529	59.7	11,515	1,300	12,224	1,380	23,031	2,600
C612_0175 MT40	17.60	88/5	3,000	2,600	3,500	10	20.1	590	66.6	11,515	1,300	12,224	1,380	23,031	2,600
C612_0175 MT50	17.60	88/5	2,500	2,500	3,000	10	30.1	634	71.6	11,515	1,300	12,224	1,380	23,031	2,600
C612_0195 MT30	19.61	549/28	3,200	2,900	4,000	10	11.4	550	62.1	9,917	1,120	14,616	1,650	24,644	2,782
C612_0195 MT40	19.61	549/28	3,000	2,900	3,500	10	15.4	602	67.9	12,204	1,378	14,616	1,650	24,644	2,782
C612_0195 MT50	19.61	549/28	2,500	2,500	3,000	10	25.4	638	72.0	12,204	1,378	14,616	1,650	24,644	2,782
C612_0230 MT30	22.67	68/3	3,200	2,900	4,000	10	12.9	573	64.7	11,515	1,300	12,224	1,380	23,031	2,600
C612_0230 MT40	22.67	68/3	3,000	2,900	3,500	10	16.9	615	69.4	11,515	1,300	12,224	1,380	23,031	2,600
C612_0230 MT50	22.67	68/3	2,500	2,500	3,000	10	26.9	643	72.6	11,515	1,300	12,224	1,380	23,031	2,600
C612_0250 MT30	24.93	5185/208	3,200	2,900	4,000	10	9.7	586	66.2	10,244	1,157	14,616	1,650	25,688	2,900
C612_0250 MT40	24.93	5185/208	3,000	2,900	3,500	10	13.7	622	70.2	12,844	1,450	14,616	1,650	25,688	2,900
C612_0250 MT50	24.93	5185/208	2,500	2,500	3,000	10	23.7	645	72.8	12,844	1,450	14,616	1,650	25,688	2,900
C612_0270 MT30	27.43	192/7	3,200	2,900	4,000	10	11.2	598	67.5	11,515	1,300	12,224	1,380	23,031	2,600
C612_0270 MT40	27.43	192/7	3,000	2,900	3,500	10	15.2	627	70.8	11,515	1,300	12,224	1,380	23,031	2,600
C612_0270 MT50	27.43	192/7	2,500	2,500	3,000	10	25.2	647	73.1	11,515	1,300	12,224	1,380	23,031	2,600
C612_0320 MT30	32.41	1037/32	3,200	2,900	4,000	10	8.4	613	69.2	10,679	1,206	14,616	1,650	25,688	2,900
C612_0320 MT40	32.41	1037/32	3,000	2,900	3,500	10	12.4	636	71.8	12,844	1,450	14,616	1,650	25,688	2,900
C612_0320 MT50	32.41	1037/32	2,500	2,500	3,000	10	22.4	650	73.4	12,844	1,450	14,616	1,650	25,688	2,900
C612_0350 MT30	34.87	1360/39	3,200	2,900	4,000	10	9.5	619	69.9	11,515	1,300	12,224	1,380	23,031	2,600
C612_0350 MT40	34.87	1360/39	3,000	2,900	3,500	10	13.5	638	72.1	11,515	1,300	12,224	1,380	23,031	2,600
C612_0350 MT50	34.87	1360/39	2,500	2,500	3,000	10	23.5	651	73.5	11,515	1,300	12,224	1,380	23,031	2,600

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



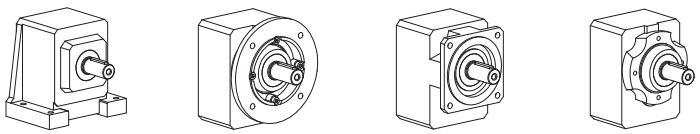
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C612 with MT TriAdapt® Motor Adapter Continued											**Noise Level ≤ 61 dB(A)** [3]				
C612_0390 MT30	39.40	1891/48	3,200	2,900	4,000	10	7.7	627	70.8	10,812	1,221	12,975	1,465	16,479	1,860
C612_0390 MT40	39.40	1891/48	3,000	2,900	3,500	10	11.7	642	72.5	10,812	1,221	12,975	1,465	16,479	1,860
C612_0450 MT30	45.33	136/3	3,200	2,900	4,000	10	8.3	634	71.6	11,515	1,300	12,224	1,380	23,031	2,600
C612_0450 MT40	45.33	136/3	3,000	2,900	3,500	10	12.3	646	72.9	11,515	1,300	12,224	1,380	23,031	2,600
C612_0450 MT50	45.33	136/3	2,500	2,500	3,000	10	22.3	653	73.8	11,515	1,300	12,224	1,380	23,031	2,600
C612_0550 MT30	55.11	496/9	3,200	2,900	4,000	10	7.6	641	72.4	11,515	1,300	12,224	1,380	23,031	2,600
C612_0550 MT40	55.11	496/9	3,000	2,900	3,500	10	11.6	649	73.3	11,515	1,300	12,224	1,380	23,031	2,600
C612_0690 MT30	68.89	620/9	3,200	2,900	4,000	10	7.1	647	73.0	11,515	1,300	12,224	1,380	23,031	2,600
C612_0690 MT40	68.89	620/9	3,000	2,900	3,500	10	11.1	652	73.6	11,515	1,300	12,224	1,380	23,031	2,600
C613 with MT TriAdapt® Motor Adapter											**Noise Level ≤ 61 dB(A)** [3]				
C613_0490 MT30	49.28	31537/640	3,200	2,900	4,000	10	7.2	637	72.0	12,688	1,432	13,829	1,561	17,287	1,952
C613_0630 MT30	63.46	48739/768	3,200	2,900	4,000	10	6.9	645	72.8	12,844	1,450	14,616	1,650	21,204	2,394
C613_0760 MT20	75.81	5307/70	3,200	2,900	4,000	10	1.7	643	72.6	7,643	863	7,643	863	9,554	1,079
C613_0770 MT30	76.80	8601/112	3,200	2,900	4,000	10	6.8	649	73.2	12,844	1,450	14,616	1,650	24,642	2,782
C613_0880 MT20	87.64	3944/45	3,200	2,900	4,000	10	1.8	647	73.0	9,200	1,039	9,200	1,039	11,500	1,298
C613_0890 MT30	88.78	799/9	3,200	2,900	4,000	10	6.9	651	73.5	11,515	1,300	12,224	1,380	23,031	2,600
C613_0980 MT30	97.63	243695/2496	3,200	2,900	4,000	10	6.7	652	73.6	12,844	1,450	14,616	1,650	25,688	2,900
C613_1060 MT20	106.1	3712/35	3,200	2,900	4,000	10	1.7	650	73.4	10,692	1,207	10,692	1,207	13,365	1,509
C613_1070 MT30	107.4	752/7	3,200	2,900	4,000	10	6.8	653	73.7	11,515	1,300	12,224	1,380	23,031	2,600
C613_1270 MT30	126.9	48739/384	3,200	2,900	4,000	10	6.6	654	73.8	12,844	1,450	14,616	1,650	25,688	2,900
C613_1350 MT20	134.8	15776/117	3,200	2,900	4,000	10	1.6	653	73.7	11,515	1,300	12,224	1,380	16,132	1,821
C613_1370 MT30	136.6	15980/117	3,200	2,900	4,000	10	6.7	654	73.9	11,515	1,300	12,224	1,380	23,031	2,600
C613_1750 MT20	175.3	7888/45	3,200	2,900	4,000	10	1.5	655	73.9	11,515	1,300	12,224	1,380	19,846	2,240
C613_1780 MT30	177.6	1598/9	3,200	2,900	4,000	10	6.6	656	74.0	11,515	1,300	12,224	1,380	23,031	2,600
C613_2130 MT20	213.1	28768/135	3,200	2,900	4,000	10	1.5	655	74.0	11,515	1,300	12,224	1,380	23,031	2,600
C613_2660 MT20	266.4	7192/27	3,200	2,900	4,000	10	1.4	656	74.1	11,515	1,300	12,224	1,380	23,031	2,600
C712 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 67 dB(A)** [3]				
C712_0043 MT30	4.259	477/112	2,200	1,900	2,600	10	101.8	139	15.7	3,476	392	3,824	432	6,953	785
C712_0043 MT40	4.259	477/112	2,200	1,900	2,600	10	105.8	256	28.9	5,899	666	5,899	666	7,374	832
C712_0043 MT50	4.259	477/112	2,200	1,900	2,600	10	115.8	532	60.1	11,272	1,273	11,272	1,273	14,090	1,591
C712_0053 MT30	5.311	1827/344	2,200	1,900	2,600	10	77.3	201	22.7	4,335	489	4,769	538	8,670	979
C712_0053 MT40	5.311	1827/344	2,200	1,900	2,600	10	81.3	352	39.8	7,120	804	7,120	804	8,900	1,005
C712_0053 MT50	5.311	1827/344	2,200	1,900	2,600	10	91.3	650	73.4	13,070	1,475	13,605	1,536	17,006	1,920
C712_0068 MT30	6.811	252/37	2,600	2,300	3,100	10	57.4	296	33.4	5,560	628	6,116	690	10,992	1,241
C712_0068 MT40	6.811	252/37	2,600	2,300	3,100	10	61.4	479	54.1	8,794	993	8,794	993	10,992	1,241
C712_0068 MT50	6.811	252/37	2,500	2,300	3,000	10	71.4	771	87.0	14,200	1,603	16,804	1,897	21,005	2,371
C712_0074 MT30	7.357	3480/473	2,200	1,900	2,600	10	70.9	330	37.2	6,005	678	6,606	746	12,011	1,356
C712_0074 MT40	7.357	3480/473	2,200	1,900	2,600	10	74.9	520	58.7	9,862	1,113	9,862	1,113	12,328	1,392
C712_0074 MT50	7.357	3480/473	2,200	1,900	2,600	10	84.9	804	90.8	14,569	1,645	18,846	2,128	23,557	2,659

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous	Cyclic						Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C712 with MT TriAdapt® Motor Adapter Continued Next Page													**Noise Level ≤ 67 dB(A)** [3]		
C712_0085 MT30	8.490	4347/512	2,600	2,300	3,100	10	44.2	399	45.0	6,930	782	7,623	861	13,214	1,492
C712_0085 MT40	8.490	4347/512	2,600	2,300	3,100	10	48.2	598	67.5	10,571	1,193	10,571	1,193	13,214	1,492
C712_0085 MT50	8.490	4347/512	2,500	2,300	3,000	10	58.2	859	97.0	15,282	1,725	20,200	2,280	25,250	2,850
C712_0094 MT30	9.435	3840/407	2,600	2,300	3,100	10	53.4	454	51.2	7,701	869	8,472	956	15,227	1,719
C712_0094 MT40	9.435	3840/407	2,600	2,300	3,100	10	57.4	653	73.7	12,182	1,375	12,182	1,375	15,227	1,719
C712_0094 MT50	9.435	3840/407	2,500	2,300	3,000	10	67.4	894	100.9	15,829	1,787	20,373	2,300	29,097	3,285
C712_0099 MT30	9.912	4599/464	2,900	2,600	3,400	10	37.5	480	54.2	8,091	913	8,900	1,005	15,052	1,699
C712_0099 MT40	9.912	4599/464	2,900	2,600	3,400	10	41.5	678	76.6	12,041	1,359	12,041	1,359	15,052	1,699
C712_0099 MT50	9.912	4599/464	2,500	2,500	3,000	10	51.5	909	102.6	16,091	1,817	23,010	2,598	28,762	3,247
C712_0120 MT30	11.76	1035/88	2,600	2,300	3,100	10	41.7	572	64.6	9,600	1,084	10,560	1,192	18,304	2,066
C712_0120 MT40	11.76	1035/88	2,600	2,300	3,100	10	45.7	761	85.9	14,644	1,653	14,644	1,653	18,304	2,066
C712_0120 MT50	11.76	1035/88	2,500	2,300	3,000	10	55.7	953	107.6	17,035	1,923	20,373	2,300	34,978	3,949
C712_0130 MT30	13.18	4851/368	2,900	2,600	3,400	10	27.6	633	71.4	10,760	1,215	11,836	1,336	18,890	2,133
C712_0130 MT40	13.18	4851/368	2,900	2,600	3,400	10	31.6	810	91.4	15,112	1,706	15,112	1,706	18,890	2,133
C712_0130 MT50	13.18	4851/368	2,500	2,500	3,000	10	41.6	977	110.3	17,696	1,998	24,448	2,760	36,097	4,075
C712_0135 MT30	13.73	4380/319	2,900	2,600	3,400	10	35.6	654	73.8	11,207	1,265	12,328	1,392	20,850	2,354
C712_0135 MT40	13.73	4380/319	2,900	2,600	3,400	10	39.6	826	93.3	16,680	1,883	16,680	1,883	20,850	2,354
C712_0135 MT50	13.73	4380/319	2,500	2,500	3,000	10	49.6	984	111.1	17,716	2,000	20,373	2,300	35,432	4,000
C712_0165 MT30	16.73	1071/64	3,100	2,900	3,600	10	21.1	751	84.8	12,091	1,365	15,025	1,696	22,994	2,596
C712_0165 MT40	16.73	1071/64	3,000	2,900	3,500	10	25.1	895	101.1	18,395	2,077	18,395	2,077	22,994	2,596
C712_0165 MT50	16.73	1071/64	2,500	2,500	3,000	10	35.1	1,014	114.5	19,160	2,163	24,448	2,760	42,518	4,800
C712_0185 MT30	18.26	420/23	2,900	2,600	3,400	10	26.5	790	89.2	14,906	1,683	16,396	1,851	26,169	2,954
C712_0185 MT40	18.26	420/23	2,900	2,600	3,400	10	30.5	921	103.9	17,716	2,000	20,373	2,300	26,169	2,954
C712_0185 MT50	18.26	420/23	2,500	2,500	3,000	10	40.5	1,025	115.7	17,716	2,000	20,373	2,300	35,432	4,000
C712_0210 MT30	20.67	1323/64	3,100	2,900	3,600	10	16.9	840	94.8	12,291	1,388	18,561	2,095	27,054	3,054
C712_0210 MT40	20.67	1323/64	3,000	2,900	3,500	10	20.9	952	107.5	20,559	2,321	21,643	2,443	27,054	3,054
C712_0210 MT50	20.67	1323/64	2,500	2,500	3,000	10	30.9	1,037	117.0	20,559	2,321	24,448	2,760	42,518	4,800
C712_0230 MT30	23.18	255/11	3,100	2,900	3,600	10	20.4	880	99.4	16,751	1,891	20,373	2,300	31,854	3,596
C712_0230 MT40	23.18	255/11	3,000	2,900	3,500	10	24.4	976	110.2	17,716	2,000	20,373	2,300	31,854	3,596
C712_0230 MT50	23.18	255/11	2,500	2,500	3,000	10	34.4	1,046	118.1	17,716	2,000	20,373	2,300	35,432	4,000
C712_0250 MT30	25.31	405/16	3,100	2,900	3,600	10	13.8	907	102.4	12,803	1,445	22,728	2,566	31,815	3,592
C712_0250 MT40	25.31	405/16	3,000	2,900	3,500	10	17.8	992	112.0	21,259	2,400	24,448	2,760	31,815	3,592
C712_0250 MT50	25.31	405/16	2,500	2,500	3,000	10	27.8	1,051	118.7	21,259	2,400	24,448	2,760	31,815	3,592
C712_0290 MT30	28.64	315/11	3,100	2,900	3,600	10	16.5	941	106.2	17,027	1,922	20,373	2,300	35,432	4,000
C712_0290 MT40	28.64	315/11	3,000	2,900	3,500	10	20.5	1,010	114.0	17,716	2,000	20,373	2,300	35,432	4,000
C712_0290 MT50	28.64	315/11	2,500	2,500	3,000	10	30.5	1,058	119.4	17,716	2,000	20,373	2,300	35,432	4,000
C712_0340 MT30	33.80	2163/64	3,100	2,900	3,600	10	10.9	977	110.3	13,188	1,489	24,448	2,760	39,811	4,494
C712_0340 MT40	33.80	2163/64	3,000	2,900	3,500	10	14.9	1,029	116.2	21,259	2,400	24,448	2,760	39,811	4,494
C712_0340 MT50	33.80	2163/64	2,500	2,500	3,000	10	24.9	1,065	120.2	21,259	2,400	24,448	2,760	39,811	4,494
C712_0350 MT30	35.07	2700/77	3,100	2,900	3,600	10	13.6	983	111.0	17,716	2,000	20,373	2,300	35,432	4,000
C712_0350 MT40	35.07	2700/77	3,000	2,900	3,500	10	17.6	1,033	116.6	17,716	2,000	20,373	2,300	35,432	4,000
C712_0350 MT50	35.07	2700/77	2,500	2,500	3,000	10	27.6	1,066	120.3	17,716	2,000	20,373	2,300	35,432	4,000
C712_0410 MT30	41.02	2625/64	3,100	2,900	3,600	10	9.5	1,008	113.8	13,517	1,526	22,265	2,514	37,108	4,189
C712_0410 MT40	41.02	2625/64	3,000	2,900	3,500	10	13.5	1,046	118.1	18,554	2,095	22,265	2,514	37,108	4,189
C712_0410 MT50	41.02	2625/64	2,500	2,500	3,000	10	23.5	1,070	120.8	18,554	2,095	22,265	2,514	37,108	4,189

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



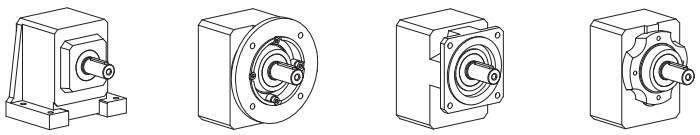
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C712 with MT TriAdapt® Motor Adapter Continued											**Noise Level ≤ 67 dB(A)** [3]				
C712_0470 MT30	46.82	515/11	3,100	2,900	3,600	10	10.7	1,024	115.7	17,716	2,000	20,373	2,300	35,432	4,000
C712_0470 MT40	46.82	515/11	3,000	2,900	3,500	10	14.7	1,054	119.0	17,716	2,000	20,373	2,300	35,432	4,000
C712_0470 MT50	46.82	515/11	2,500	2,500	3,000	10	24.7	1,073	121.1	17,716	2,000	20,373	2,300	35,432	4,000
C712_0570 MT30	56.82	625/11	3,100	2,900	3,600	10	9.4	1,042	117.7	17,716	2,000	20,373	2,300	35,432	4,000
C712_0570 MT40	56.82	625/11	3,000	2,900	3,500	10	13.4	1,063	120.0	17,716	2,000	20,373	2,300	35,432	4,000
C712_0570 MT50	56.82	625/11	2,500	2,500	3,000	10	23.4	1,076	121.5	17,716	2,000	20,373	2,300	35,432	4,000
C712_0700 MT30	69.55	765/11	3,100	2,900	3,600	10	8.3	1,055	119.1	17,716	2,000	20,373	2,300	29,091	3,284
C712_0700 MT40	69.55	765/11	3,000	2,900	3,500	10	12.3	1,069	120.7	17,716	2,000	20,373	2,300	29,091	3,284
C713 with MT TriAdapt® Motor Adapter											**Noise Level ≤ 67 dB(A)** [3]				
C713_0510 MT40	50.85	18711/368	3,000	2,900	3,500	10	13.1	1,058	119.5	21,259	2,400	24,448	2,760	36,099	4,075
C713_0650 MT40	64.55	4131/64	3,000	2,900	3,500	10	12.6	1,067	120.5	21,259	2,400	24,448	2,760	42,518	4,800
C713_0800 MT40	79.73	5103/64	3,000	2,900	3,500	10	12.4	1,072	121.1	21,259	2,400	24,448	2,760	42,518	4,800
C713_0810 MT30	80.97	20727/256	3,100	2,900	3,600	10	7.2	1,062	119.9	17,492	1,975	21,642	2,443	27,052	3,054
C713_0890 MT40	89.42	6885/77	3,000	2,900	3,500	10	12.6	1,074	121.3	17,716	2,000	20,373	2,300	35,432	4,000
C713_0980 MT40	97.63	10935/112	3,000	2,900	3,500	10	12.2	1,076	121.4	21,259	2,400	24,448	2,760	31,816	3,592
C713_0990 MT30	99.14	6345/64	3,100	2,900	3,600	10	7.0	1,069	120.7	18,518	2,090	24,448	2,760	31,812	3,591
C713_1100 MT40	110.5	1215/11	3,000	2,900	3,500	10	12.3	1,077	121.6	17,716	2,000	20,373	2,300	35,432	4,000
C713_1300 MT40	130.4	8343/64	3,000	2,900	3,500	10	12.0	1,078	121.8	21,259	2,400	24,448	2,760	39,812	4,494
C713_1320 MT30	132.4	33887/256	3,100	2,900	3,600	10	6.8	1,075	121.3	19,575	2,210	24,448	2,760	39,807	4,494
C713_1350 MT40	135.3	72900/539	3,000	2,900	3,500	10	12.1	1,079	121.8	17,716	2,000	20,373	2,300	35,432	4,000
C713_1370 MT30	137.3	10575/77	3,100	2,900	3,600	10	7.0	1,075	121.4	17,716	2,000	20,373	2,300	35,432	4,000
C713_1810 MT40	180.6	13905/77	3,000	2,900	3,500	10	11.9	1,080	122.0	17,716	2,000	20,373	2,300	35,432	4,000
C713_1830 MT30	183.4	24205/132	3,100	2,900	3,600	10	6.8	1,078	121.7	17,716	2,000	20,373	2,300	35,432	4,000
C713_2190 MT40	219.2	16875/77	3,000	2,900	3,500	10	11.9	1,081	122.0	17,716	2,000	20,373	2,300	35,432	4,000
C713_2230 MT30	222.5	29375/132	3,100	2,900	3,600	10	6.7	1,079	121.9	17,716	2,000	20,373	2,300	35,432	4,000
C812 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 67 dB(A)** [3]				
C812_0042 MT50	4.225	1711/405	2,100	1,800	2,500	10	264.3	573	64.7	11,756	1,327	11,756	1,327	14,695	1,659
C812_0054 MT50	5.387	1239/230	2,100	1,800	2,500	10	195.5	728	82.2	14,454	1,632	14,454	1,632	18,067	2,040
C812_0067 MT50	6.670	767/115	2,500	2,200	2,800	10	151.9	858	96.9	17,377	1,962	17,377	1,962	21,721	2,452
C812_0073 MT50	7.304	168/23	2,100	1,800	2,500	10	179.0	1,138	128.4	19,597	2,212	19,597	2,212	24,496	2,765
C812_0085 MT50	8.472	1652/195	2,500	2,200	2,800	10	113.4	983	111.0	21,179	2,391	21,179	2,391	26,474	2,989
C812_0090 MT50	9.043	208/23	2,500	2,200	2,800	10	141.2	1,305	147.3	23,559	2,660	23,559	2,660	29,448	3,325
C812_0100 MT50	10.15	944/93	2,500	2,400	3,000	10	93.8	1,059	119.6	24,585	2,776	24,585	2,776	30,732	3,469
C812_0115 MT50	11.49	448/39	2,500	2,200	2,800	10	106.8	1,458	164.7	27,458	3,100	28,716	3,242	35,895	4,052
C812_0125 MT40	12.75	5546/435	2,700	2,400	3,200	10	63.5	902	101.8	15,488	1,748	15,488	1,748	19,360	2,186
C812_0125 MT50	12.75	5546/435	2,500	2,400	3,000	10	73.5	1,133	127.9	28,429	3,209	29,596	3,341	36,994	4,176
C812_0140 MT50	13.76	1280/93	2,500	2,400	3,000	10	89.2	1,548	174.8	29,164	3,292	33,334	3,763	41,667	4,704
C812_0170 MT40	17.10	1180/69	2,900	2,700	3,400	10	45.2	1,041	117.5	19,605	2,213	19,605	2,213	24,506	2,767
C812_0170 MT50	17.10	1180/69	2,500	2,500	3,000	10	55.2	1,197	135.1	31,353	3,540	37,463	4,229	46,829	5,287

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes



Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



"C" Series–Concentric Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum			Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque					
			Continuous		Cyclic					Nominal [1]		Acceleration		Peak [2]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C812 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 67 dB(A)** [3]	
C812_0175 MT40	17.29	1504/87	2,700	2,400	3,200	10	60.6	1,360	153.6	21,001	2,371	21,001	2,371	26,251	2,964
C812_0175 MT50	17.29	1504/87	2,500	2,400	3,000	10	70.6	1,633	184.4	31,466	3,552	36,672	4,140	50,163	5,663
C812_0200 MT40	20.26	6077/300	2,900	2,700	3,400	10	37.1	1,102	124.4	22,426	2,532	22,426	2,532	28,032	3,165
C812_0200 MT50	20.26	6077/300	2,500	2,500	3,000	10	47.1	1,222	137.9	33,174	3,745	42,518	4,800	53,566	6,047
C812_0230 MT40	23.19	1600/69	2,900	2,700	3,400	10	43.6	1,527	172.4	26,583	3,001	26,583	3,001	33,229	3,751
C812_0230 MT50	23.19	1600/69	2,500	2,500	3,000	10	53.6	1,705	192.4	31,889	3,600	36,672	4,140	63,497	7,168
C812_0260 MT40	26.06	3127/120	2,900	2,700	3,400	10	28.3	1,169	131.9	27,158	3,066	27,283	3,080	34,103	3,850
C812_0260 MT50	26.06	3127/120	2,500	2,500	3,000	10	38.3	1,247	140.8	36,079	4,073	42,518	4,800	65,167	7,357
C812_0270 MT40	27.47	412/15	2,900	2,700	3,400	10	35.9	1,597	180.3	30,408	3,433	30,408	3,433	38,010	4,291
C812_0270 MT50	27.47	412/15	2,500	2,500	3,000	10	45.9	1,732	195.5	31,889	3,600	36,672	4,140	63,778	7,200
C812_0340 MT40	33.59	2183/65	2,900	2,700	3,400	10	22.1	1,213	137.0	28,022	3,163	33,261	3,755	41,577	4,694
C812_0340 MT50	33.59	2183/65	2,500	2,500	3,000	10	32.1	1,263	142.6	37,204	4,200	42,518	4,800	74,407	8,400
C812_0350 MT40	35.33	106/3	2,900	2,700	3,400	10	27.6	1,673	188.9	31,889	3,600	36,672	4,140	46,242	5,220
C812_0350 MT50	35.33	106/3	2,500	2,500	3,000	10	37.6	1,760	198.7	31,889	3,600	36,672	4,140	63,778	7,200
C812_0400 MT40	39.94	2596/65	2,900	2,700	3,400	10	18.9	1,234	139.4	28,769	3,248	38,126	4,304	47,658	5,380
C812_0400 MT50	39.94	2596/65	2,500	2,500	3,000	10	28.9	1,271	143.4	33,527	3,785	38,126	4,304	47,658	5,380
C812_0460 MT40	45.54	592/13	2,900	2,700	3,400	10	21.7	1,723	194.5	31,889	3,600	36,672	4,140	56,374	6,364
C812_0460 MT50	45.54	592/13	2,500	2,500	3,000	10	31.7	1,777	200.6	31,889	3,600	36,672	4,140	63,778	7,200
C812_0540 MT40	54.15	704/13	2,900	2,700	3,400	10	18.6	1,746	197.1	31,889	3,600	36,672	4,140	63,778	7,200
C812_0540 MT50	54.15	704/13	2,500	2,500	3,000	10	28.6	1,785	201.5	31,889	3,600	36,672	4,140	63,778	7,200
C812_0690 MT40	68.89	620/9	2,900	2,700	3,400	10	15.6	1,767	199.5	31,889	3,600	36,672	4,140	63,778	7,200
C812_0690 MT50	68.89	620/9	2,500	2,500	3,000	10	25.6	1,792	202.3	31,889	3,600	36,672	4,140	63,778	7,200
C813 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 67 dB(A)** [3]	
C813_0490 MT40	49.18	49914/1015	2,900	2,700	3,400	10	15.2	1,734	195.7	29,597	3,341	29,597	3,341	36,997	4,177
C813_0660 MT40	65.96	10620/161	2,900	2,700	3,400	10	14.0	1,764	199.2	32,936	3,718	37,466	4,230	46,832	5,287
C813_0780 MT40	78.13	54693/700	2,900	2,700	3,400	10	13.4	1,775	200.4	34,401	3,884	42,518	4,800	53,567	6,047
C813_0790 MT30	79.34	285619/3600	2,900	2,700	3,400	10	8.3	1,747	197.2	20,953	2,365	22,424	2,531	28,029	3,164
C813_0890 MT40	89.44	14400/161	2,900	2,700	3,400	10	13.9	1,782	201.2	31,889	3,600	36,672	4,140	63,501	7,169
C813_0910 MT30	90.82	18800/207	2,900	2,700	3,400	10	8.7	1,760	198.7	24,905	2,812	26,582	3,001	33,227	3,751
C813_1010 MT40	100.5	28143/280	2,900	2,700	3,400	10	12.9	1,786	201.7	36,202	4,087	42,518	4,800	65,171	7,357
C813_1060 MT40	105.9	3708/35	2,900	2,700	3,400	10	13.4	1,788	201.9	31,889	3,600	36,672	4,140	63,778	7,200
C813_1080 MT30	107.6	4841/45	2,900	2,700	3,400	10	8.2	1,772	200.1	28,411	3,207	30,405	3,432	38,006	4,291
C813_1300 MT40	129.5	58941/455	2,900	2,700	3,400	10	12.4	1,793	202.4	37,204	4,200	42,518	4,800	74,407	8,400
C813_1360 MT40	136.3	954/7	2,900	2,700	3,400	10	12.8	1,794	202.6	31,889	3,600	36,672	4,140	63,778	7,200
C813_1380 MT30	138.4	2491/18	2,900	2,700	3,400	10	7.6	1,784	201.5	29,899	3,375	36,672	4,140	46,238	5,220
C813_1760 MT40	175.6	15984/91	2,900	2,700	3,400	10	12.4	1,798	203.0	31,889	3,600	36,672	4,140	63,778	7,200
C813_1780 MT30	178.4	6956/39	2,900	2,700	3,400	10	7.3	1,792	202.3	31,543	3,561	36,672	4,140	56,370	6,364
C813_2090 MT40	208.9	19008/91	2,900	2,700	3,400	10	12.2	1,800	203.2	31,889	3,600	36,672	4,140	63,778	7,200
C813_2120 MT30	212.1	8272/39	2,900	2,700	3,400	10	7.1	1,795	202.7	31,889	3,600	36,672	4,140	63,778	7,200
C813_2660 MT40	265.7	1860/7	2,900	2,700	3,400	10	12.0	1,801	203.3	31,889	3,600	36,672	4,140	63,778	7,200
C813_2700 MT30	269.8	7285/27	2,900	2,700	3,400	10	6.9	1,799	203.0	31,889	3,600	36,672	4,140	63,778	7,200

[1] Maximum torque for continuous input RPM - horizontal output position.

[2] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[3] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"C" Series–Concentric Helical ServoFit® Modular System Selection Data



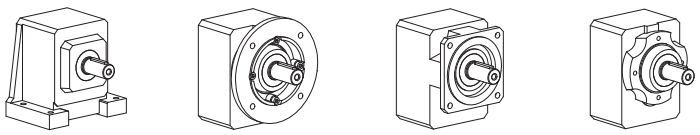
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [1]		Output Torque Acceleration		Output Torque Peak [2]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$	kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
C912 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 73 dB(A) [3]**	
C912_0041 MT50	4.15	1891/456	2,000	1,700	2,200	10	567.5	695	78.5	11,759	1,327	12,934	1,460	18,885	2,132
C912_0052 MT50	5.21	4087/784	2,000	1,700	2,200	10	420.6	936	105.7	14,781	1,669	16,259	1,836	23,739	2,680
C912_0065 MT50	6.52	2867/440	2,300	2,000	2,600	10	311.0	1,192	134.6	18,476	2,086	20,323	2,294	29,673	3,350
C912_0074 MT50	7.41	4355/588	2,000	1,700	2,200	10	373.7	1,658	187.2	20,999	2,371	23,099	2,608	33,726	3,807
C912_0083 MT50	8.29	1525/184	2,300	2,000	2,600	10	231.0	1,464	165.2	23,500	2,653	25,850	2,918	37,743	4,261
C912_0093 MT50	9.26	611/66	2,300	2,000	2,600	10	280.9	2,043	230.6	26,251	2,963	28,876	3,260	42,160	4,760
C912_0098 MT50	9.79	5795/592	2,500	2,300	3,000	10	189.6	1,634	184.5	27,756	3,133	30,532	3,447	44,578	5,033
C912_0120 MT50	11.8	1625/138	2,300	2,000	2,600	10	212.5	2,425	273.8	33,387	3,769	36,726	4,146	53,622	6,054
C912_0125 MT50	12.4	6161/496	2,500	2,300	3,000	10	141.4	1,840	207.7	35,219	3,976	38,741	4,374	56,564	6,386
C912_0140 MT50	13.9	6175/444	2,500	2,300	3,000	10	176.3	2,653	299.5	39,435	4,452	43,379	4,897	63,336	7,150
C912_0165 MT50	16.5	5795/352	2,500	2,500	3,000	10	101.5	2,020	228.0	37,713	4,258	37,713	4,258	47,141	5,322
C912_0175 MT50	17.6	6565/372	2,500	2,300	3,000	10	133.2	2,915	329.1	50,040	5,649	55,044	6,214	80,367	9,073
C912_0200 MT50	20.2	2257/112	2,500	2,500	3,000	10	79.6	2,110	238.2	44,280	4,999	44,280	4,999	55,349	6,249
C912_0230 MT50	23.4	6175/264	2,500	2,500	3,000	10	96.8	3,134	353.8	53,148	6,000	53,581	6,049	66,977	7,561
C912_0250 MT50	25.3	6893/272	2,500	2,500	3,000	10	61.5	2,183	246.4	53,014	5,985	53,014	5,985	66,268	7,481
C912_0290 MT50	28.6	2405/84	2,500	2,500	3,000	10	76.4	3,240	365.8	53,148	6,000	57,577	6,500	78,638	8,878
C912_0320 MT50	32.1	3599/112	2,500	2,500	3,000	10	48.0	2,232	252.0	55,803	6,300	63,801	7,203	79,751	9,003
C912_0360 MT50	36.0	7345/204	2,500	2,500	3,000	10	59.6	3,324	375.3	53,148	6,000	57,577	6,500	94,151	10,629
C912_0390 MT50	39.3	4087/104	2,500	2,500	3,000	10	39.9	2,260	255.2	53,230	6,009	63,876	7,211	92,963	10,495
C912_0460 MT50	45.7	3835/84	2,500	2,500	3,000	10	46.8	3,381	381.7	53,148	6,000	57,577	6,500	106,296	12,000
C912_0560 MT50	55.8	335/6	2,500	2,500	3,000	10	39.0	3,413	385.3	53,148	6,000	57,577	6,500	106,296	12,000
C912_0700 MT50	70.0	10075/144	2,500	2,500	3,000	10	32.8	3,436	387.9	53,148	6,000	57,577	6,500	82,414	9,304
C913 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 73 dB(A) [3]**	
C913_0650 MT50	64.6	295545/4576	2,500	2,500	3,000	10	28.3	3,429	387.1	58,960	6,656	70,864	8,000	94,010	10,613
C913_0780 MT40	77.7	60939/784	2,800	2,600	3,200	10	15.8	3,374	380.9	39,232	4,429	44,280	4,999	55,351	6,249
C913_0790 MT50	79.1	115107/1456	2,500	2,500	3,000	10	26.8	3,445	389.0	62,006	7,000	70,864	8,000	110,376	12,461
C913_0900 MT40	90.2	55575/616	2,800	2,600	3,200	10	17.0	3,400	383.8	52,907	5,973	53,584	6,049	66,979	7,561
C913_0920 MT50	91.8	8075/88	2,500	2,500	3,000	10	28.0	3,454	389.9	53,148	6,000	57,577	6,500	106,296	12,000
C913_0990 MT50	99.4	20679/208	2,500	2,500	3,000	10	25.7	3,457	390.3	62,006	7,000	70,864	8,000	124,012	14,000
C913_1100 MT40	110.4	21645/196	2,800	2,600	3,200	10	15.6	3,426	386.7	53,148	6,000	57,577	6,500	78,641	8,878
C913_1120 MT50	112.3	3145/28	2,500	2,500	3,000	10	26.6	3,462	390.8	53,148	6,000	57,577	6,500	106,296	12,000
C913_1260 MT50	126.1	183549/1456	2,500	2,500	3,000	10	24.8	3,465	391.2	62,006	7,000	70,864	8,000	124,012	14,000
C913_1390 MT40	138.9	66105/476	2,800	2,600	3,200	10	14.5	3,445	388.9	53,148	6,000	57,577	6,500	94,154	10,629
C913_1410 MT50	141.3	565/4	2,500	2,500	3,000	10	25.5	3,468	391.5	53,148	6,000	57,577	6,500	106,296	12,000
C913_1760 MT40	176.1	34515/196	2,800	2,600	3,200	10	13.6	3,458	390.3	53,148	6,000	57,577	6,500	106,296	12,000
C913_1790 MT50	179.1	5015/28	2,500	2,500	3,000	10	24.7	3,472	392.0	53,148	6,000	57,577	6,500	106,296	12,000
C913_2150 MT40	215.4	3015/14	2,800	2,600	3,200	10	13.1	3,464	391.1	53,148	6,000	57,577	6,500	106,296	12,000

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

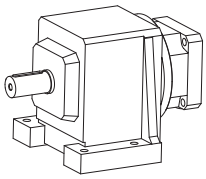
Housing Styles

N — Foot Mounted **F** — Round Flange **Q** — Square Flange **G** — Tapped Holes

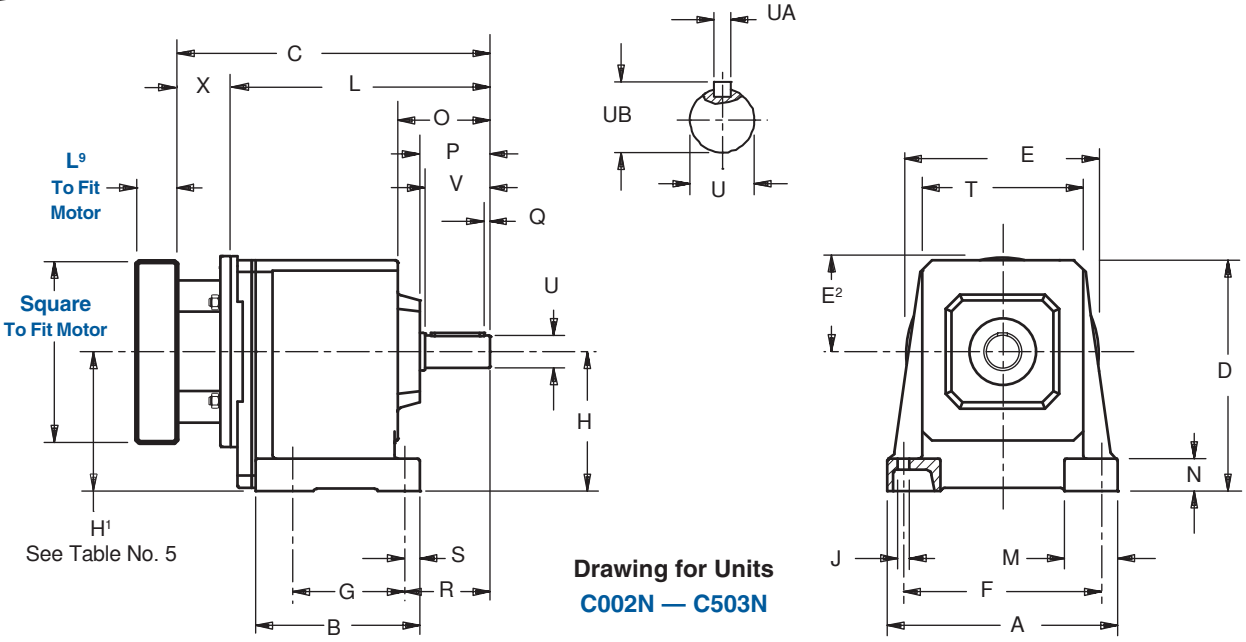


Contact STOBER for availability of "Q" housing style.

See Page 74 for required ordering information and part number example.



ServoFit® "C" Series–Concentric Helical Foot Mount – "N" Housing Dimensional Data



Drawing for Units
C002N — C503N

Table No. 1 **"C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	A	B	D	F	G	H	J	M	N	O	P	Q	R
C002	5.20	3.74	5.67	4.33	2.44	3.23	.28	1.38	.79	2.24	1.73	.16	2.17
C102/C103	6.93	4.65	6.97	5.91	2.76	4.02	.35	1.65	.98	2.72	2.13	.16	2.64
C202/C203	7.87	5.31	7.68	6.69	3.35	4.53[1)]	.43	1.97	1.18	3.39	2.56	.16	3.11
C302/C303	8.46	6.06	8.46	7.28	4.13	5.12[1)]	.43	1.97	1.18	3.35	2.56	.16	3.11
C402/C403	10.04	7.09	9.65	8.66	4.33	5.71	.55	2.36	1.38	4.17	3.39	.16	4.13
C502/C503	11.42	7.76	11.42	9.65	5.12	6.69	.71	2.76	1.57	4.21	3.39	.16	4.25
C612/C613	11.81	10.43	12.40	9.65	8.46	7.87[1)]	.71	2.95	1.57	6.02	4.17	.20	5.12
C712/C713	14.37	11.22	14.76	11.81	9.25	9.25[1)]	.71	3.54	1.97	7.28	5.00	.20	6.42
C812/C813	17.13	14.17	17.72	13.39	11.81	11.42	.87	3.74	2.17	8.58	5.83	.39	7.48
C912/C913	20.08	16.14	20.87	15.75	13.39	13.39	1.02	4.33	2.36	10.08	7.01	.39	8.74

[1)] See Table No. 5

Table No. 2 **Metric output available on request**

Base Module	S	T	Standard Shaft - inches			Optional Shaft - mm			V	Z[1]
			U	UA	UB	U	UA	UB		
C002	.43	3.62	.750	$^3/_{16} \times ^3/_{16} \times 1^7/_{32}$	.83	20_{k6}	A6x6x32	22.5	1.57	–
C102/C103	.51	4.88	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	A8x7x40	28	1.97	–
C202/C203	.55	5.43	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33	2.36	–
C302/C303	.55	5.91	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33	2.36	–
C402/C403	.75	6.89	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43	3.15	–
C502/C503	.87	7.56	1.625	$^3/_8 \times ^3/_8 \times 2^7/_8$	1.79	40_{k6}	A12x8X70	43	3.15	–
C612/C613	.98	6.97	2.125	$^1/_2 \times ^1/_2 \times 3^5/_{32}$	2.35	50_{k6}	A14x9x90	53.5	3.94	6.57
C712/C713	.98	7.56	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	60_{m6}	A18x11x100	64	4.72	7.91
C812/C813	1.14	8.78	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	70_{m6}	A20x12x125	74.5	5.51	8.70
C912/C913	1.34	10.91	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01	90_{m6}	A25x14x140	95	6.69	10.24

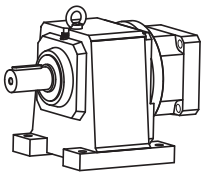
Table No. 3 **"MT" Motor Plate Dimensions**

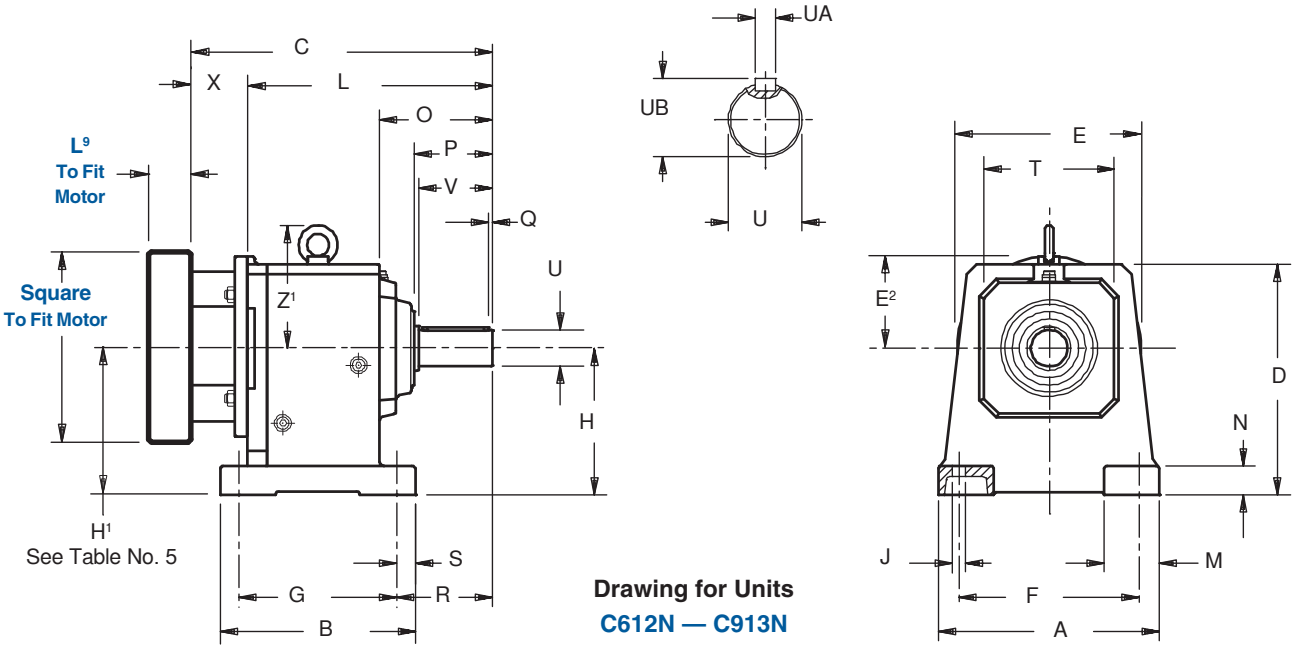
Motor Adapter	Motor Shaft D[6] Max. [1)]		Motor Plate [2)] Thickness L[9] Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E[2]	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

[1)] If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
[2)] Motor plate maximum thickness (L[9]) will vary with motor shaft length but will not be less than shown.

See web site for drawings.

ServoFit "C" Series–Concentric Helical Foot Mount – "N" Housing Dimensional Data





Drawing for Units
C612N — C913N

Table No. 4

"C" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style

Base	MT10		MT20		MT30		MT40		MT50		Approx.
Module	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	7.63	6.06	8.19	6.22	–	–	–	–	–	–	18
C102	8.93	7.36	9.49	7.52	9.96	7.60	–	–	–	–	29
C103	10.39	8.82	–	–	–	–	–	–	–	–	34
C202	10.03	8.46	10.59	8.62	11.06	8.70	–	–	–	–	38
C203 [1]	11.49	9.92	12.28	10.31	–	–	–	–	–	–	45
C302	–	–	11.34	9.37	11.81	9.45	13.07	9.57	–	–	49
C303 [1]	12.24	10.67	13.03	11.06	–	–	–	–	–	–	56
C402	–	–	13.23	11.26	13.70	11.34	14.96	11.46	–	–	71
C403	–	–	14.92	12.95	–	–	–	–	–	–	78
C502	–	–	14.06	12.09	14.53	12.17	15.78	12.28	16.04	12.83	95
C503	–	–	15.75	13.78	–	–	–	–	–	–	111
C612 [1]	–	–	–	–	15.47	13.11	16.73	13.23	16.95	13.74	115
C613 [1]	–	–	16.73	14.76	17.91	15.55	–	–	–	–	159
C712	–	–	–	–	17.56	15.20	18.78	15.28	19.00	15.79	199
C713 [1]	–	–	–	–	19.96	17.60	–	–	–	–	221
C812	–	–	–	–	–	–	21.41	17.91	21.24	18.03	322
C813	–	–	–	–	22.60	20.24	24.21	20.71	–	–	342
C912	–	–	–	–	–	–	–	–	24.27	21.06	596
C913	–	–	–	–	–	–	26.06	22.56	27.54	24.33	678

[1] See Table No. 5

Table No. 5

"C" Series – Input Dimension

Base	MT20	MT30	MT40	MT50
Module	H1	H1	H1	H1
C203	3.09	—	—	—
C303	3.66	—	—	—
C612	—	7.63	7.63	7.63
C613	—	—	7.63	—
C713	—	—	10.00	—

Units shown in Table 5 do not have a concentric input and output.

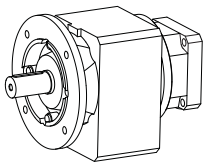
Part No. Example

Foot Mounting with TriAdapt® Motor Adapter

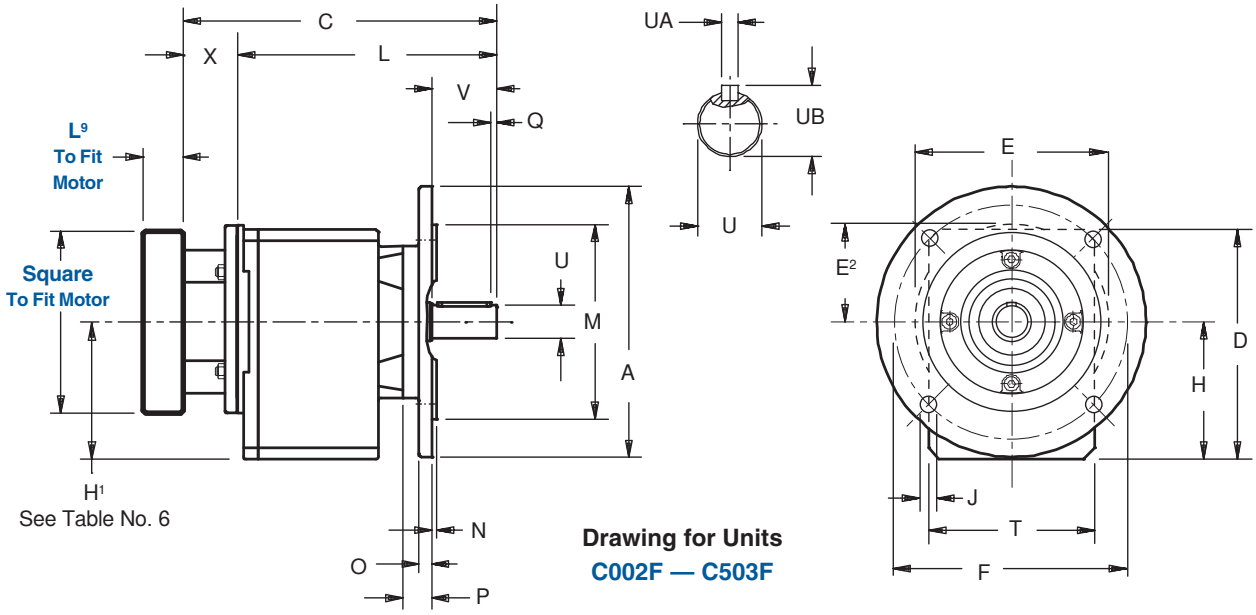
C302N0620 MT10

For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

See web site for drawings.



ServoFit® "C" Series–Concentric Helical Round Flange – "F" Housing Dimensional Data



Drawing for Units
C002F — C503F

Table No. 1 **"C" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	A	D	F	H	J	M	N	O	P	Q	T
C002	6.30	5.55	5.12	3.11	.35	4.331 +.001/-.0004	.12	.39	.71	.16	3.82
C102/C103	7.87	6.89	6.50	3.94	.43	5.118 +.001/-.0004	.14	.47	.83	.16	5.12
C202/C203	7.87	7.56	6.50	4.41 1)	.43	5.118 +.001/-.0004	.14	.47	1.06	.16	5.59
C302/C303	9.84	8.35	8.46	5.00 1)	.55	7.087 +.001/-.0004	.16	.47	1.06	.16	6.06
C402/C403	9.84	9.55	8.46	5.61	.55	7.087 +.001/-.0004	.16	.55	1.10	.16	7.01
C502/C503	11.81	11.26	10.43	6.54	.55	9.055 +.001/-.001	.16	.63	1.14	.16	7.68
C612/C613	11.81	11.97	10.43	7.44 1)	.55	9.055 +.001/-.001	.16	.67	1.42	.20	8.86
C712/C713	13.78	14.61	11.81	9.09 1)	.71	9.842 +.000/-.001	.20	.71	1.73	.20	10.43
C812/C813	15.75	17.52	13.78	11.22	.71	11.811 +.000/-.001	.20	.79	1.77	.39	12.20
C912/C913	17.72	20.63	15.75 *	13.15	.71	13.780 +.000/-.001	.20	.91	1.97	.39	14.37

1) See Table No. 6
* C913 has 8 mounting holes (located 22.5° from horizontal) in the output flange instead of 4 as shown in the drawing.

Table No. 2 **Metric output available on request**

Base Module	Standard Shaft - inches			Optional Shaft - mm			V	Z1
	U	UA	UB	U	UA	UB		
C002	.750	3/16 × 3/16 × 1 7/32	.83	20k6	A6x6x32	22.5	1.57	–
C102/C103	1.000	1/4 × 1/4 × 1 9/16	1.11	25k6	A8x7x40	28	1.97	–
C202/C203	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8x7X50	33	2.36	–
C302/C303	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8x7X50	33	2.36	–
C402/C403	1.625	3/8 × 3/8 × 2 7/8	1.79	40k6	A12x8X70	43	3.15	–
C502/C503	1.625	3/8 × 3/8 × 2 7/8	1.79	40k6	A12x8X70	43	3.15	–
C612/C613	2.125	1/2 × 1/2 × 3 5/32	2.35	50k6	A14x9x90	53.5	3.94	6.57
C712/C713	2.375	5/8 × 5/8 × 3 15/16	2.65	60m6	A18x11x100	64	4.72	7.91
C812/C813	2.875	3/4 × 3/4 × 4 5/16	3.21	70m6	A20x12x125	74.5	5.51	8.70
C912/C913	3.625	7/8 × 7/8 × 5 1/2	4.01	90m6	A25x14x140	95	6.69	10.24

Table No. 3 **"MT" Motor Plate Dimensions**

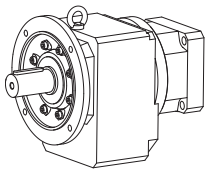
Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness L9 Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

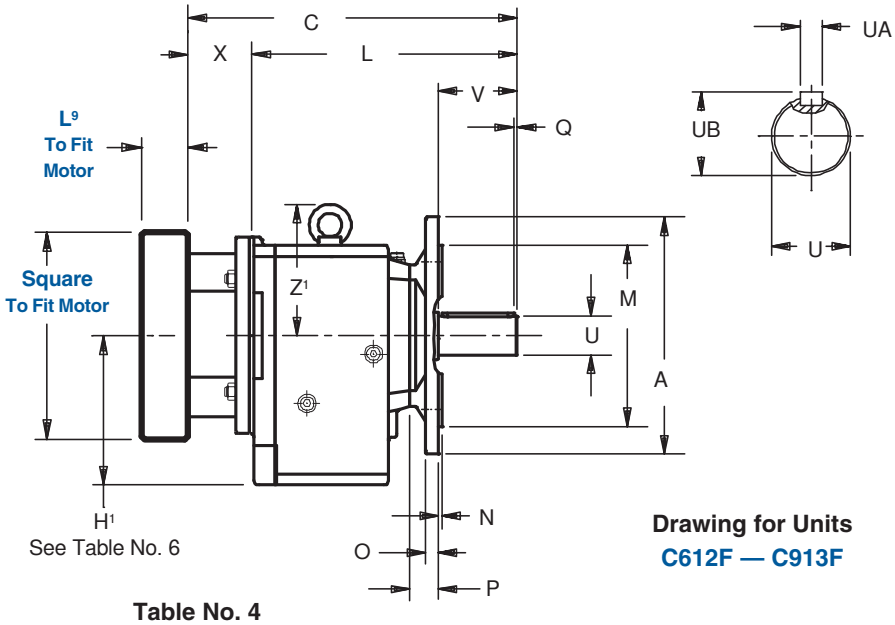
1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

See web site for drawings.

ServoFit® "C" Series–Concentric Helical Round Flange – "F" Housing Dimensional Data





Drawing for Units
C612F — C913F

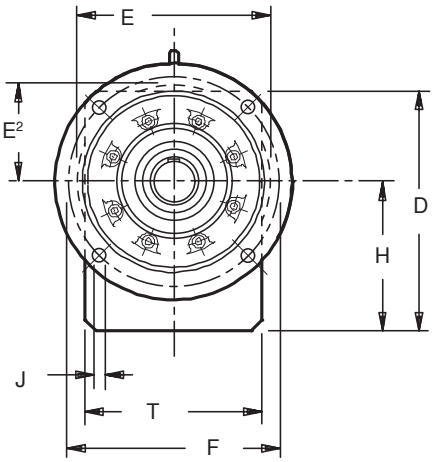


Table No. 4

"C" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style

Base	MT10		MT20		MT30		MT40		MT50		Approx.
Module	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	7.63	6.06	8.19	6.22	–	–	–	–	–	–	18
C102	8.93	7.36	9.49	7.52	9.96	7.60	–	–	–	–	29
C103	10.39	8.82	–	–	–	–	–	–	–	–	34
C202	10.03	8.46	10.59	8.62	11.06	8.70	–	–	–	–	38
C203 [1)]	11.49	9.92	12.28	10.31	–	–	–	–	–	–	45
C302	–	–	11.34	9.37	11.81	9.45	13.07	9.57	–	–	49
C303 [1)]	12.24	10.67	13.03	11.06	–	–	–	–	–	–	56
C402	–	–	13.23	11.26	13.70	11.34	14.96	11.46	–	–	71
C403	–	–	14.92	12.95	–	–	–	–	–	–	78
C502	–	–	14.06	12.09	14.53	12.17	15.78	12.28	16.04	12.83	95
C503	–	–	15.75	13.78	–	–	–	–	–	–	111
C612 [1)]	–	–	–	–	15.47	13.11	16.73	13.23	16.95	13.74	115
C613 [1)]	–	–	16.73	14.76	17.91	15.55	–	–	–	–	159
C712	–	–	–	–	17.56	15.20	18.78	15.28	19.00	15.79	199
C713 [1)]	–	–	–	–	19.96	17.60	–	–	–	–	221
C812	–	–	–	–	–	–	21.41	17.91	21.24	18.03	322
C813	–	–	–	–	22.60	20.24	24.21	20.71	–	–	342
C912	–		–	–	–	–	–	–	24.27	21.06	596
C913	–		–	–	–	–	26.06	22.56	27.54	24.33	678

[1)]See Table No. 6

Table No. 5 Optional Flange Dimensions (Inches)

Base Module	Flange Size	A	F	J	M	N	O
C0	120	4.724	3.93	.28	3.150 +.001/-.0004	.12	.39
	140	5.512	4.53	.35	3.740 +.001/-.0004	.12	.39
C1	140	5.512	4.53	.35	3.740 +.001/-.0004	.14	.32
	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
C2	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	250	9.843	8.46	.55	7.087 +.001/-.0004	.16	.47
C3	160	6.300	5.12	.35	4.331 +.001/-.0004	.14	.39
	200	7.874	6.50	.43	5.118 +.001/-.0004	.14	.47
C4	200	7.874	6.50	.43	5.118 +.001/-.0004	.16	.55
	300	11.811	10.43	.55	9.055 +.001/-.001	.16	.55
C5	250	9.843	8.46	.55	7.087 +.001/-.0004	.16	.55
C8	350	13.780	11.81	.71	9.842 +.000/-.001	.20	.71
	450	17.717	15.75	.71	13.780 +.000/-.001	.20	.79

Optional flange are not available for all sizes.

Table No. 6

"C" Series – Input Dimension

Base	MT20	MT30	MT40	MT50
Module	H1	H1	H1	H1
C203	2.97	—	—	—
C303	3.54	—	—	—
C612	—	7.44	7.44	7.44
C613	—	—	7.44	—
C713	—	—	9.84	—

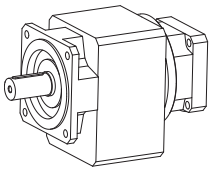
Units shown in Table 6 do not have a concentric input and output.

Part No. Example

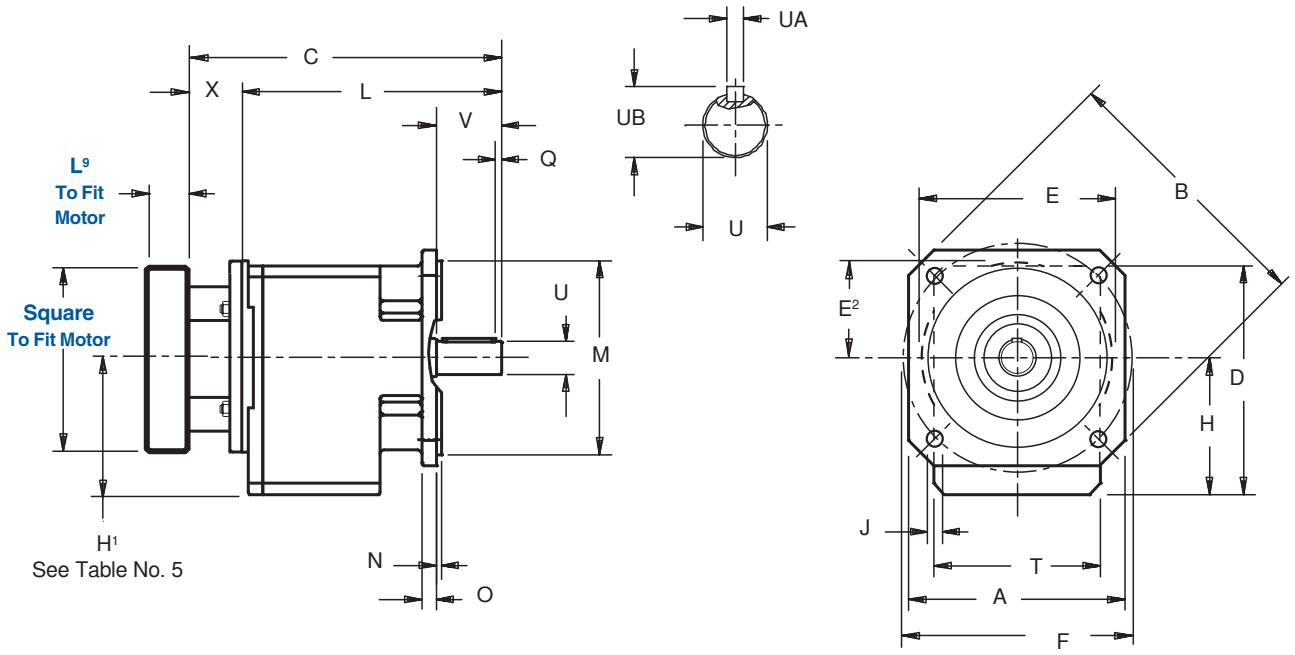
Round Flange with TriAdapt® Motor Adapter

C302F0620 MT10

See web site for drawings.



ServoFit® "C" Series–Concentric Helical Square Flange – "Q" Housing Dimensional Data



Drawing for Units
C002Q — C503Q

Table No. 1 **"C" Series – Square Flange Unit Dimensions (Inches) – "Q" Housing Style**

Base Module	A	B	D	F	H	J	M	N	O	Q	T
C002	4.88	6.30	5.55	5.12	3.11	.35	4.331 +.001/-.0004	.14	.35	.16	3.82
C102/C103	5.71	7.56	6.89	6.50	3.94	.43	5.118 +.001/-.0004	.14	.43	.16	5.12
C202/C203	5.71	7.56	7.56	6.50	4.41 [1)]	.43	5.118 +.001/-.0004	.14	.43	.16	5.59
C302/C303	7.87	9.84	8.35	8.46	5.00 [1)]	.55	7.087 +.001/-.0004	.16	.55	.16	6.06
C402/C403	7.87	9.84	9.55	8.46	5.61	.55	7.087 +.001/-.0004	.16	.55	.16	7.01
C502/C503	9.84	11.81	11.26	10.43	6.54	.55	9.055 +.001/-.001	.16	.63	.16	7.68

[1)]See Table No. 5

Table No. 2 **Metric output available on request**

Base	Standard Shaft - inches			Optional Shaft - mm		
Module	U	UA	UB	U	UA	UB
C002	.750	$^{3}/_{16} \times {}^{3}/_{16} \times 1{}^{7}/_{32}$	.83	20_{k6}	A6x6x32	22.5
C102/C103	1.000	$^{1}/_{4} \times {}^{1}/_{4} \times 1{}^{9}/_{16}$	1.11	25_{k6}	A8x7x40	28
C202/C203	1.250	$^{1}/_{4} \times {}^{1}/_{4} \times 1{}^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C302/C303	1.250	$^{1}/_{4} \times {}^{1}/_{4} \times 1{}^{15}/_{16}$	1.36	30_{k6}	A8x7X50	33
C402/C403	1.625	$^{3}/_{8} \times {}^{3}/_{8} \times 2{}^{7}/_{8}$	1.79	40_{k6}	A12x8X70	43
C502/C503	1.625	$^{3}/_{8} \times {}^{3}/_{8} \times 2{}^{7}/_{8}$	1.79	40_{k6}	A12x8X70	43

Contact STOBER Drives for availability of "Q" housing style.

ServoFit® "C" Series–Concentric Helical Square Flange – "Q" Housing Dimensional Data

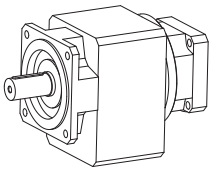


Table No. 3 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness L9 Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

Table No. 4

"C" Series – Square Flange Unit Dimensions (Inches) – "Q" Housing Style

Base Module	MT10		MT20		MT30		MT40		MT50		Approx. Wt.(lbs.)
	C	L	C	L	C	L	C	L	C	L	
C002	7.63	6.06	8.19	6.22	–	–	–	–	–	–	18
C102	8.93	7.36	9.49	7.52	9.96	7.60	–	–	–	–	29
C103	10.39	8.82	–	–	–	–	–	–	–	–	34
C202	10.03	8.46	10.59	8.62	11.06	8.70	–	–	–	–	38
C203 1)	11.49	9.92	12.28	10.31	–	–	–	–	–	–	45
C302	–	–	11.34	9.37	11.81	9.45	13.07	9.57	–	–	49
C303 1)	12.24	10.67	13.03	11.06	–	–	–	–	–	–	56
C402	–	–	13.23	11.26	13.70	11.34	14.96	11.46	–	–	71
C403	–	–	14.92	12.95	–	–	–	–	–	–	78
C502	–	–	14.06	12.09	14.53	12.17	15.78	12.28	16.04	12.83	95
C503	–	–	15.75	13.78	–	–	–	–	–	–	111

1) See Table No. 6

Table No. 5

Input Dimension (Inches)

Base Module	MT20
	H1
C203	2.97
C303	3.54

Units shown in Table 5 do not have a concentric input and output.

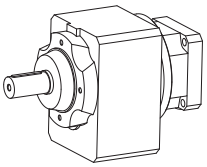
Part No. Example

Square Flange with TriAdapt® Motor Adapter

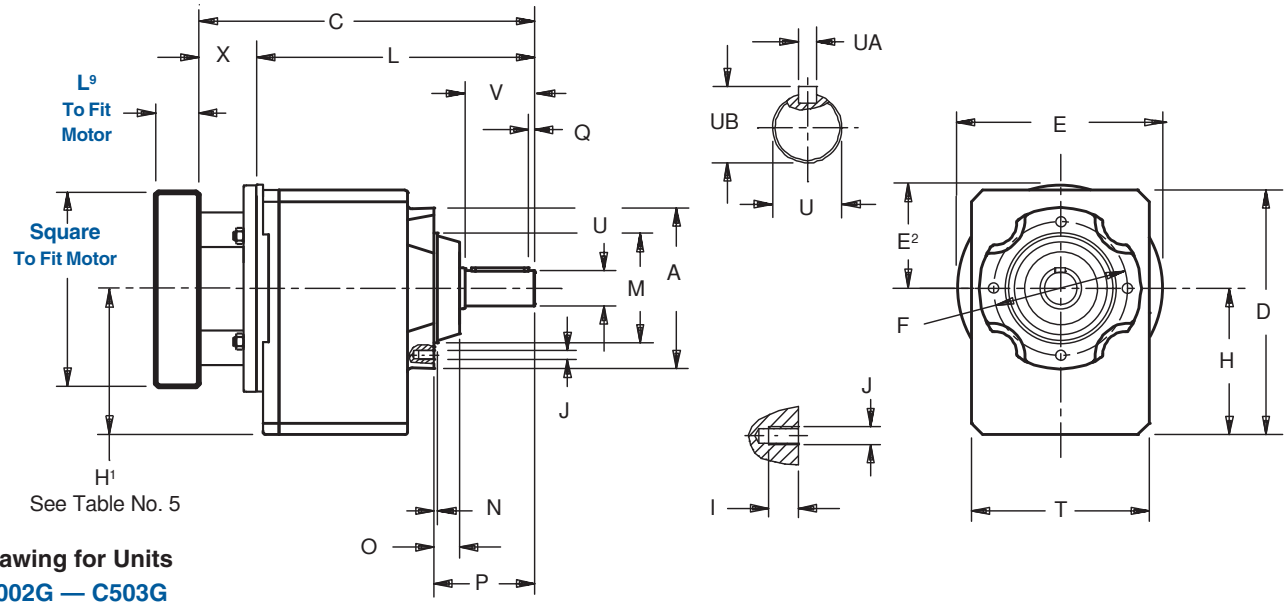
C302Q0620 MT20

See pages 8-25 for SServoFit Modular System configuration, mounting, and selection data
For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

See web site for drawings.



ServoFit® "C" Series–Concentric Helical Tapped Hole – "G" Housing Dimensional Data



Drawing for Units
C002G — C503G

Table No. 1 **"C" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style**

Base Module	A	D	F	H	I	J	M	N	O	P	Q	T
C002	3.43	5.55	2.95	3.11	.39	4-M6	2.165 +.001/-.0003	.12	.55	2.28	.16	3.82
C102/C103	4.72	6.89	3.94	3.94	.51	4-M6	3.150 +.001/-.0003	.12	.67	2.80	.16	5.12
C202/C203	5.51	7.56	4.53	4.41 1)	.51	4-M8	3.740 +.001/-.0004	.12	.87	3.43	.16	5.59
C302/C303	5.51	8.35	4.53	5.00 1)	.51	4-M8	3.740 +.001/-.0004	.12	.87	3.43	.16	6.06
C402/C403	6.30	9.55	5.12	5.61	.63	4-M10	4.331 +.001/-.0004	.14	.87	4.25	.16	7.01
C502/C503	7.56	11.26	6.50	6.54	.63	8-M10 2)	5.118 +.001/-.0004	.14	.91	4.29	.16	7.68
C612/C613	7.09	11.97	6.50	7.44 1)	.63	8-M10	5.512 +.001/-.0004	.20	1.18	5.35	.20	8.86
C712/C713	7.68	14.61	7.28	9.09 1)	.75	8-M12	6.102 +.001/-.0004	.31	1.46	6.46	.20	10.43
C812/C813	8.90	17.52	8.46	11.22	.75	8-M12	7.283 +.001/-.001	.20	1.46	7.28	.39	12.20
C912/C913	11.02	20.63	10.43	13.15	1.02	8-M16	9.055 +.001/-.001	.20	1.65	8.66	.39	14.37

1) See Table No. 5
2) C502/C503 has 8 holes located as shown on drawing for C612G—C913G.

Table No. 2 **Metric output available on request**

Base Module	Standard Shaft - inches			Optional Shaft - mm			V	Z1
	U	UA	UB	U	UA	UB		
C002	.750	3/16 × 3/16 × 1 7/32	.83	20k6	A6x6x32	22.5	1.57	–
C102/C103	1.000	1/4 × 1/4 × 1 9/16	1.11	25k6	A8x7x40	28	1.97	–
C202/C203	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8x7X50	33	2.36	–
C302/C303	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8x7X50	33	2.36	–
C402/C403	1.625	3/8 × 3/8 × 2 7/8	1.79	40k6	A12x8X70	43	3.15	–
C502/C503	1.625	3/8 × 3/8 × 2 7/8	1.79	40k6	A12x8X70	43	3.15	–
C612/C613	2.125	1/2 × 1/2 × 3 5/32	2.35	50k6	A14x9x90	53.5	3.94	6.57
C712/C713	2.375	5/8 × 5/8 × 3 15/16	2.65	60m6	A18x11x100	64	4.72	7.91
C812/C813	2.875	3/4 × 3/4 × 4 5/16	3.21	70m6	A20x12x125	74.5	5.51	8.70
C912/C913	3.625	7/8 × 7/8 × 5 1/2	4.01	90m6	A25x14x140	95	6.69	10.24

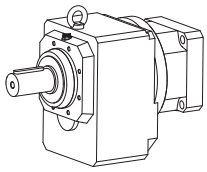
Table No. 3 **"MT" Motor Plate Dimensions**

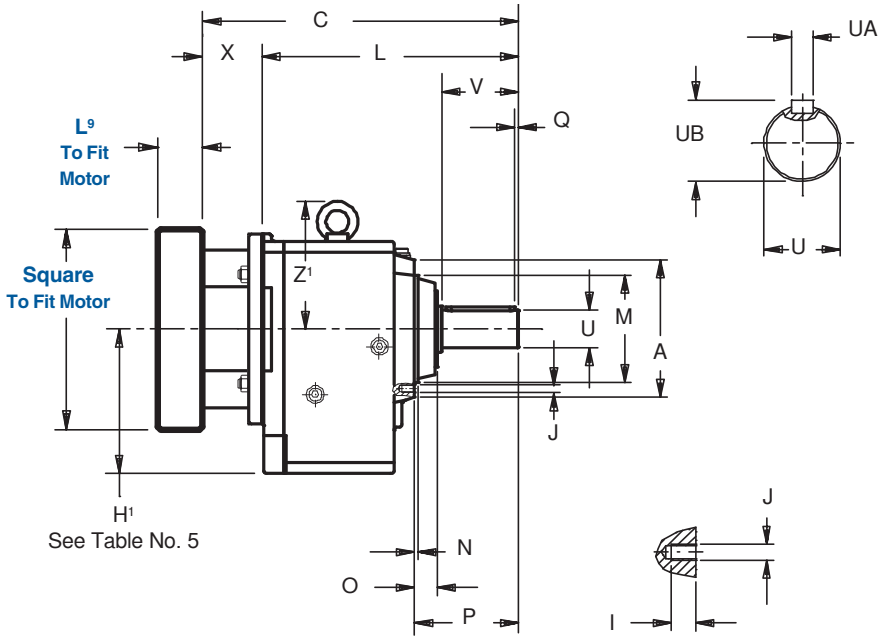
Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness		Inches			Wt. lbs.
			L9 Minimum					
	mm	ins.	mm	inches	E	E2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

See web site for drawings.

ServoFit® "C" Series–Concentric Helical Tapped Hole – "G" Housing Dimensional Data





Drawing for Units
C612G — C913G

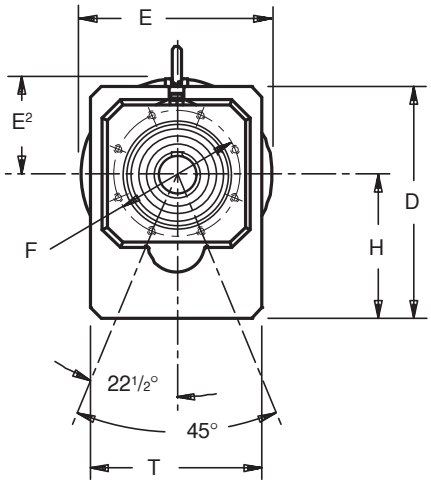


Table No. 4

"C" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Base	MT10		MT20		MT30		MT40		MT50		Approx.
Module	C	L	C	L	C	L	C	L	C	L	Wt.(lbs.)
C002	7.63	6.06	8.19	6.22	–	–	–	–	–	–	18
C102	8.93	7.36	9.49	7.52	9.96	7.60	–	–	–	–	29
C103	10.39	8.82	–	–	–	–	–	–	–	–	34
C202	10.03	8.46	10.59	8.62	11.06	8.70	–	–	–	–	38
C203 [1]	11.49	9.92	12.28	10.31	–	–	–	–	–	–	45
C302	–	–	11.34	9.37	11.81	9.45	13.07	9.57	–	–	49
C303 [1]	12.24	10.67	13.03	11.06	–	–	–	–	–	–	56
C402	–	–	13.23	11.26	13.70	11.34	14.96	11.46	–	–	71
C403	–	–	14.92	12.95	–	–	–	–	–	–	78
C502	–	–	14.06	12.09	14.53	12.17	15.78	12.28	16.04	12.83	95
C503	–	–	15.75	13.78	–	–	–	–	–	–	111
C612 [1]	–	–	–	–	15.47	13.11	16.73	13.23	16.95	13.74	115
C613 [1]	–	–	16.73	14.76	17.91	15.55	–	–	–	–	159
C712	–	–	–	–	17.56	15.20	18.78	15.28	19.00	15.79	199
C713 [1]	–	–	–	–	19.96	17.60	–	–	–	–	221
C812	–	–	–	–	–	–	21.41	17.91	21.24	18.03	322
C813	–	–	–	–	22.60	20.24	24.21	20.71	–	–	342
C912	–		–	–	–	–	–	–	24.27	21.06	596
C913	–		–	–	–	–	26.06	22.56	27.54	24.33	678

[1] See Table No. 6

Part No. Example

Tapped Holes Housing with TriAdapt® Motor Adapter

C302G0620 MT20

Table No. 5

"C" Series – Input Dimension

Base	MT20	MT30	MT40	MT50
Module	H1	H1	H1	H1
C203	2.97	—	—	—
C303	3.54	—	—	—
C612	—	7.44	7.44	7.44
C613	—	—	7.44	—
C713	—	—	9.84	—

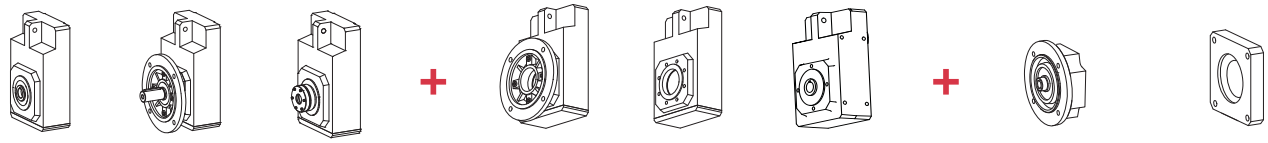
Units shown in Table 5 do not have a concentric input and output.

See pages 8-25 for ServoFit Modular System configuration, mounting, and selection data
For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

See web site for drawings.

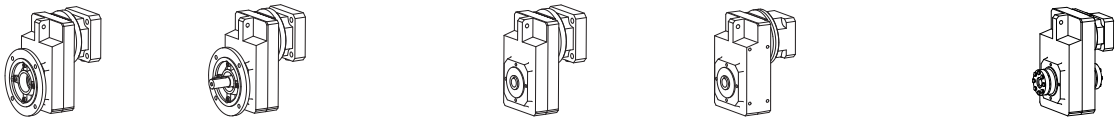
"F" Series–Offset Helical ServoFit® SMS Gearhead Overview

Output Style + Housing Style + TriAdapt® Input = Gearhead Configurations



Style A Hollow Output | Style V Solid Output | Style W Bushing Output | + | Style F Round Flange | Style G Tapped Holes | Style GN Foot Mount | + | MT Motor Adapter | Motor Plate to fit any servo motor

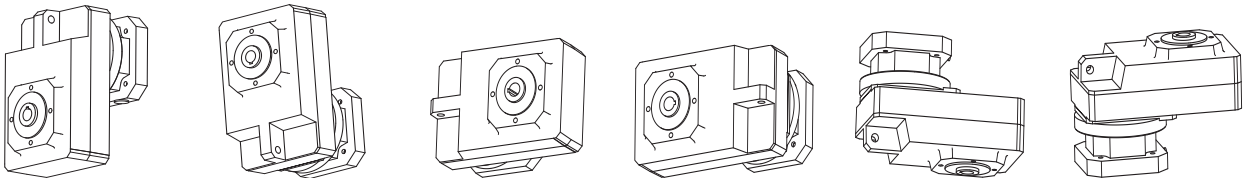
Gearhead Configurations



Style AF | Style VF | Style AG | Style AGN | Style WG

Mounting Positions

EL1 EL2 EL3 EL4 EL5 EL6



Part No. Explanation with OPTIONS and REQUIRED INFORMATION

F 4 0 2 V F 0135 MT20 B

- **F** — OFfset Helical
- **4** — Unit Size No.
- **0** — Design Generation
- **2** — No. of Stages (**02** = 2 Stage, determined by ratio)
- **V** — OUTPUT STYLE
  - "**V**" Solid Output — ONLY AVAILABLE with "F" Housing Style
    - **SPECIFY IN A NOTE**: Standard or Stainless Steel[1)] Imperial or Metric [1)]
  - "**A**" Hollow Output
    - **SPECIFY IN A NOTE**: Standard or Stainless Steel [1)] Imperial or Metric [1)]
  - "**W**" Wobble Free Bushing
    - **SPECIFY IN A NOTE**: Bushing Part Number Single or Double Bushing (Double not possible on F203, F303, F403, F603) Single Side 5 or Side 6 (Side 6 not possible on F203, F303, F403, F603)
- **F** — HOUSING STYLE
  - "**F**" Housing Style — Flange Mounting
  - "**G**" Housing Style — Tapped Holes
  - "**GN**" Housing Style — Foot Mount
- **0135** — Nominal Ratio: (**0135** = 13.5:1)
- **MT20** — TriAdapt® Motor Adapter Size: **MT10**, **MT20**, **MT30**, **MT40**
- **B** — This designation is only required when ordering a:
  - **B** — Beverage Duty
  - **F** — Food Duty

[1)]Not available in all sizes.

Bushing Part No. Explanation

W F 2 – 103

- **W F** — **W**obble **F**ree Single Side Bushing
- **2** — Base Module Size example: F**2**02/F**2**03)
- **103** — Output Bore in inches — **103** = $1^{3}/_{16}$

W F N 2 – 103

- **W F N** — **W**obble **F**ree — **N**o Covers — Double Side Bushing
- **2** — Base Module Size example: F**2**02)
- **103** — Output Bore in inches — **103** = $1^{3}/_{16}$

THE FOLLOWING INFORMATION IS REQUIRED FOR ANY UNIT:

Mounting Position	—	EL1 EL2 EL3 EL4 EL5 EL6
Motor	—	Motor Manufacturer and Model Number
Paint	—	Black (Standard) ..... White ..... Stainless
Package Option	—	Beverage Duty ..... Food Duty
Backlash Option	—	Standard or Reduced Backlash

See web site for drawings.

"F" Series—Offset Helical ServoFit® Modular System

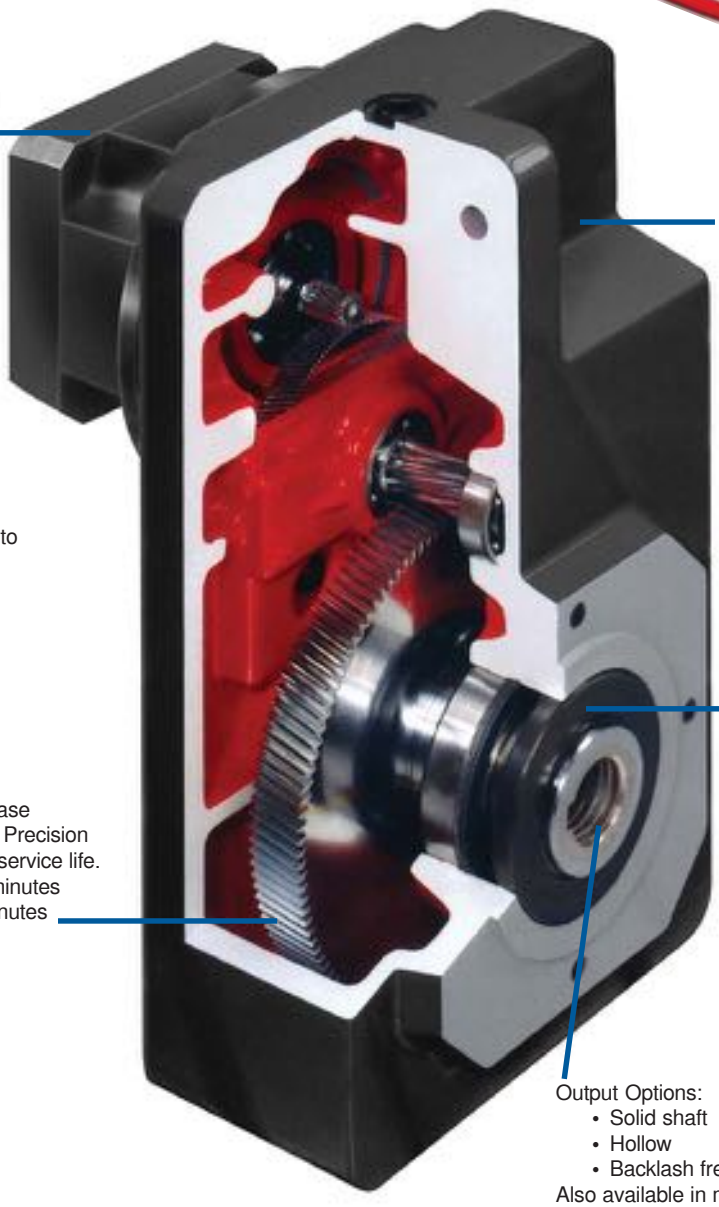
Compact size and flexibility make these gear drives a popular choice for applications that require high performance, efficiency, and durability. Series "F" gear drives, like all SMS units, are available with a wide selection of configurations to match almost any mounting requirement.

Performance Specifications:

- Input RPM up to 4,500 RPM
- Nominal output torque — 200 to 9,700 in. lbs. (22-1,100 Nm)
- Reducer ratios from 4.1:1 to 540:1
- 5 year limited warranty (2 years on bearings, seals, etc.)
- Ambient temperature — 0°C to +40°C (104°F)
- Noise level — as low as 53 dB(A)
- ≥ 95.5% Efficiency
- Maintenance free
- Can be back driven



Motor plate can easily be changed to fit your choice of motors.



One-piece cast iron housing with precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities, and eliminates leakage problems common to two-piece housings.

Shipped with the proper amount of oil to prevent gear damaging dry start-ups

Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life.
Standard backlash is ≤11 arc minutes
Reduced backlash is ≤7 arc minutes

Output Options:
- Solid shaft
- Hollow
- Backlash free, wobble free bushings

Also available in metric or stainless shaft or quill.

Also available in washdown and poultry duty.
Maximum 10 working days for custom motor plates.

See web site for drawings.



"F" Series–Offset Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
F102 with MT TriAdapt® Motor Adapter															**Noise Level ≤ 55 dB(A) [4]**
F102_0043 MT10	4.308	56/13	3,500	3,000	6,000	11/8	2.1	35	4.0	396	45	396	45	496	56
F102_0043 MT20	4.308	56/13	3,500	3,000	5,000	11/8	2.7	37	4.1	539	61	746	84	933	105
F102_0065 MT10	6.462	84/13	3,500	3,000	6,000	11/8	1.4	45	5.1	563	64	563	64	704	79
F102_0065 MT20	6.462	84/13	3,500	3,000	5,000	11/8	2.0	46	5.2	617	70	930	105	1,326	150
F102_0072 MT10	7.156	322/45	3,700	3,600	6,000	11/8	1.2	47	5.3	613	69	613	69	767	87
F102_0072 MT20	7.156	322/45	3,500	3,500	5,000	11/8	1.8	48	5.4	639	72	930	105	1,444	163
F102_0089 MT10	8.948	1029/115	3,700	3,600	6,000	11/8	1.0	50	5.7	688	78	737	83	921	104
F102_0089 MT20	8.948	1029/115	3,500	3,500	5,000	11/8	1.6	51	5.8	688	78	930	105	1,734	196
F102_0110 MT10	10.92	273/25	4,000	4,000	6,000	11/8	0.9	53	5.9	735	83	868	98	1,085	123
F102_0110 MT20	10.92	273/25	3,500	3,500	5,000	11/8	1.5	53	6.0	735	83	930	105	1,772	200
F102_0135 MT10	13.59	231/17	4,000	4,000	6,000	11/8	0.8	54	6.1	791	89	930	105	1,297	146
F102_0135 MT20	13.59	231/17	3,500	3,500	5,000	11/8	1.4	55	6.2	791	89	930	105	1,772	200
F102_0185 MT10	18.46	1495/81	3,700	3,600	6,000	11/6	0.9	66	7.4	876	99	1,063	120	1,978	223
F102_0185 MT20	18.46	1495/81	3,500	3,500	5,000	11/6	1.5	66	7.5	876	99	1,063	120	2,126	240
F102_0230 MT10	23.08	3185/138	3,700	3,600	6,000	11/6	0.8	67	7.5	944	107	1,063	120	2,126	240
F102_0230 MT20	23.08	3185/138	3,500	3,500	5,000	11/6	1.4	67	7.6	944	107	1,063	120	2,126	240
F102_0280 MT10	28.17	169/6	4,000	4,000	6,000	11/6	0.8	67	7.6	1,009	114	1,063	120	2,126	240
F102_0280 MT20	28.17	169/6	3,500	3,500	5,000	11/6	1.4	67	7.6	1,009	114	1,063	120	2,126	240
F102_0350 MT10	35.05	3575/102	4,000	4,000	6,000	11/6	0.7	68	7.7	1,063	120	1,063	120	2,126	240
F102_0350 MT20	35.05	3575/102	3,500	3,500	5,000	11/6	1.3	68	7.7	1,063	120	1,063	120	2,126	240
F102_0460 MT10	46.43	325/7	4,000	4,000	6,000	11/6	0.7	68	7.7	1,063	120	1,063	120	2,126	240
F102_0460 MT20	46.43	325/7	3,500	3,500	5,000	11/6	1.3	68	7.7	1,063	120	1,063	120	2,126	240
F102_0560 MT10	55.97	2015/36	4,000	4,000	6,000	11/6	0.7	68	7.7	1,063	120	1,063	120	2,126	240
F102_0560 MT20	55.97	2015/36	3,500	3,500	5,000	11/6	1.3	68	7.7	1,063	120	1,063	120	2,126	240
F102_0700 MT10	70.06	1261/18	4,000	4,000	6,000	11/6	0.6	68	7.7	1,063	120	1,063	120	2,126	240
F102_0700 MT20	70.06	1261/18	3,500	3,500	5,000	11/6	1.2	68	7.7	1,063	120	1,063	120	2,126	240
F102_0940 MT10	93.63	7865/84	4,000	4,000	6,000	11/6	0.6	68	7.7	1,063	120	1,063	120	2,126	240
F102_1120 MT10	111.9	2015/18	4,000	4,000	6,000	11/6	0.6	68	7.7	1,063	120	1,063	120	2,126	240
F102_1400 MT10	139.8	559/4	4,000	4,000	6,000	11/6	0.6	69	7.7	1,063	120	1,063	120	2,126	240
F202 with MT TriAdapt® Motor Adapter Continued Next Page															**Noise Level ≤ 53 dB(A) [4]**
F202_0047 MT10	4.680	2616/559	3,100	2,600	5,000	11/8	4.7	60	6.8	452	51	452	51	564	64
F202_0047 MT20	4.680	2616/559	3,100	2,600	5,000	11/8	5.3	64	7.2	1,103	125	1,769	200	2,495	282
F202_0047 MT30	4.680	2616/559	3,100	2,600	4,000	11/8	10.1	80	9.1	1,103	125	1,860	210	2,495	282
F202_0056 MT20	5.552	5341/962	3,100	2,600	5,000	11/8	4.2	75	8.5	1,168	132	1,860	210	2,921	330
F202_0056 MT30	5.552	5341/962	3,100	2,600	4,000	11/8	9.0	91	10.3	1,168	132	1,860	210	2,921	330
F202_0072 MT10	7.167	5777/806	3,600	3,100	6,000	11/8	2.5	89	10.0	653	74	653	74	816	92
F202_0072 MT20	7.167	5777/806	3,500	3,100	5,000	11/8	3.1	92	10.4	1,272	144	1,860	210	3,543	400
F202_0072 MT30	7.167	5777/806	3,500	3,100	4,000	11/8	7.9	106	11.9	1,272	144	1,860	210	3,543	400
F202_0090 MT10	9.006	3161/351	3,600	3,100	6,000	11/8	1.9	102	11.5	793	89	793	89	991	112
F202_0090 MT20	9.006	3161/351	3,500	3,100	5,000	11/8	2.5	105	11.8	1,372	155	1,860	210	3,543	400
F202_0090 MT30	9.006	3161/351	3,500	3,100	4,000	11/8	7.3	115	13.0	1,372	155	1,860	210	3,543	400

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"F" Series–Offset Helical ServoFit® Modular System Selection Data



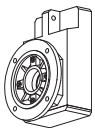
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
F202 with MT TriAdapt® Motor Adapter Continued															**Noise Level ≤ 53 dB(A)** [4]
F202_0110 MT10	10.80	7303/676	3,800	3,500	6,000	11/8	1.5	111	12.5	917	104	917	104	1,147	129
F202_0110 MT20	10.80	7303/676	3,500	3,500	5,000	11/8	2.1	113	12.8	1,458	165	1,860	210	3,543	400
F202_0110 MT30	10.80	7303/676	3,500	3,500	4,000	11/8	6.9	121	13.7	1,458	165	1,860	210	3,543	400
F202_0135 MT10	13.63	109/8	3,800	3,500	6,000	11/8	1.2	120	13.5	1,112	126	1,112	126	1,391	157
F202_0135 MT20	13.63	109/8	3,500	3,500	5,000	11/8	1.8	121	13.7	1,576	178	1,860	210	3,543	400
F202_0135 MT30	13.63	109/8	3,500	3,500	4,000	11/8	6.6	127	14.3	1,576	178	1,860	210	3,543	400
F202_0185 MT10	18.65	6360/341	3,600	3,100	6,000	11/6	1.5	145	16.4	1,699	192	1,699	192	2,124	240
F202_0185 MT20	18.65	6360/341	3,500	3,100	5,000	11/6	2.1	146	16.5	1,749	197	2,392	270	4,252	480
F202_0185 MT30	18.65	6360/341	3,500	3,100	4,000	11/6	6.9	151	17.0	1,749	197	2,392	270	4,252	480
F202_0230 MT10	23.43	2320/99	3,600	3,100	6,000	11/6	1.3	150	16.9	1,888	213	2,062	233	2,578	291
F202_0230 MT20	23.43	2320/99	3,500	3,100	5,000	11/6	1.9	151	17.0	1,888	213	2,392	270	4,252	480
F202_0230 MT30	23.43	2320/99	3,500	3,100	4,000	11/6	6.7	154	17.3	1,888	213	2,392	270	4,252	480
F202_0280 MT10	28.11	4020/143	3,800	3,500	6,000	11/6	1.1	152	17.2	2,006	226	2,387	269	2,984	337
F202_0280 MT20	28.11	4020/143	3,500	3,500	5,000	11/6	1.7	153	17.3	2,006	226	2,392	270	4,252	480
F202_0280 MT30	28.11	4020/143	3,500	3,500	4,000	11/6	6.5	155	17.5	2,006	226	2,392	270	4,252	480
F202_0350 MT10	35.46	390/11	3,800	3,500	6,000	11/6	1.0	155	17.5	2,126	240	2,392	270	3,618	408
F202_0350 MT20	35.46	390/11	3,500	3,500	5,000	11/6	1.6	155	17.5	2,126	240	2,392	270	4,252	480
F202_0350 MT30	35.46	390/11	3,500	3,500	4,000	11/6	6.4	156	17.7	2,126	240	2,392	270	4,252	480
F202_0470 MT10	47.05	1035/22	4,000	3,900	6,000	11/6	0.8	156	17.7	2,126	240	2,392	270	4,252	480
F202_0470 MT20	47.05	1035/22	3,500	3,500	5,000	11/6	1.4	157	17.7	2,126	240	2,392	270	4,252	480
F202_0470 MT30	47.05	1035/22	3,500	3,500	4,000	11/6	6.2	157	17.8	2,126	240	2,392	270	4,252	480
F202_0570 MT10	56.73	624/11	4,000	3,900	6,000	11/6	0.8	157	17.7	2,126	240	2,392	270	4,252	480
F202_0570 MT20	56.73	624/11	3,500	3,500	5,000	11/6	1.4	157	17.8	2,126	240	2,392	270	4,252	480
F202_0570 MT30	56.73	624/11	3,500	3,500	4,000	11/6	6.2	158	17.8	2,126	240	2,392	270	4,252	480
F202_0700 MT10	70.13	5400/77	4,000	3,900	6,000	11/6	0.7	158	17.8	2,126	240	2,392	270	4,252	480
F202_0700 MT20	70.13	5400/77	3,500	3,500	5,000	11/6	1.3	158	17.8	2,126	240	2,392	270	4,252	480
F202_0700 MT30	70.13	5400/77	3,500	3,500	4,000	11/6	6.1	158	17.9	2,126	240	2,392	270	4,252	480
F202_0940 MT10	93.82	1032/11	4,000	3,900	6,000	11/6	0.7	158	17.9	2,126	240	2,392	270	4,252	480
F202_0940 MT20	93.82	1032/11	3,500	3,500	5,000	11/6	1.3	158	17.9	2,126	240	2,392	270	4,252	480
F202_1130 MT10	112.7	1240/11	4,000	3,900	6,000	11/6	0.7	158	17.9	2,126	240	2,392	270	4,252	480
F202_1410 MT10	140.9	1550/11	4,000	3,900	6,000	11/6	0.6	158	17.9	2,126	240	2,392	270	4,252	480
F203 with MT TriAdapt® Motor Adapter															**Noise Level ≤ 53 dB(A)** [4]
F203_1840 MT10	184.3	16215/88	4,000	3,900	6,000	11/7	0.7	159	17.9	2,126	240	2,392	270	4,252	480
F203_2220 MT10	222.2	2444/11	4,000	3,900	6,000	11/7	0.7	159	17.9	2,126	240	2,392	270	4,252	480
F203_2750 MT10	274.7	21150/77	4,000	3,900	6,000	11/7	0.7	159	17.9	2,126	240	2,392	270	4,252	480
F203_3670 MT10	367.5	4042/11	4,000	3,900	6,000	11/7	0.7	159	17.9	2,126	240	2,392	270	4,252	480
F203_4420 MT10	441.5	14570/33	4,000	3,900	6,000	11/7	0.6	159	17.9	2,126	240	2,392	270	4,252	480
F203_5520 MT10	551.9	36425/66	4,000	3,900	6,000	11/7	0.6	159	17.9	2,126	240	2,392	270	4,252	480

Motor Shaft

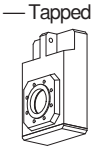
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48

Housing Styles

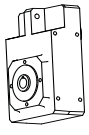
F — Round Flange



G — Tapped Holes



GN — Foot Mount



The "F" Housing Style is available as Hollow (A) or Solid (V) Output.
"G" style is Hollow (A) or Bushing (W).

See Page 104 for required ordering information and part number example.



"F" Series–Offset Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
F302 with MT TriAdapt® Motor Adapter															**Noise Level ≤ 53 dB(A) [4]**
F302_0046 MT20	4.644	4992/1075	3,000	2,600	4,500	11/8	9.4	71	8.0	1,596	180	1,756	198	2,576	291
F302_0046 MT30	4.644	4992/1075	3,000	2,600	4,000	11/8	14.2	92	10.4	1,832	207	3,094	349	5,758	650
F302_0057 MT20	5.720	143/25	3,000	2,600	4,500	11/8	6.9	89	10.1	1,963	222	2,163	244	3,069	346
F302_0057 MT30	5.720	143/25	3,000	2,600	4,000	11/8	11.7	111	12.5	1,963	222	2,455	277	3,069	346
F302_0072 MT20	7.172	208/29	3,500	3,100	5,000	11/8	5.1	109	12.3	2,117	239	2,711	306	3,741	422
F302_0072 MT30	7.172	208/29	3,500	3,100	4,000	11/8	9.9	129	14.5	2,117	239	2,992	338	3,741	422
F302_0090 MT20	8.986	5616/625	3,500	3,100	5,000	11/8	3.8	128	14.4	2,282	258	3,100	350	4,516	510
F302_0090 MT30	8.986	5616/625	3,500	3,100	4,000	11/8	8.6	144	16.2	2,282	258	3,100	350	4,516	510
F302_0110 MT20	10.79	1456/135	3,500	3,500	5,000	11/8	3.1	140	15.8	2,426	274	3,100	350	5,225	590
F302_0110 MT30	10.79	1456/135	3,500	3,500	4,000	11/8	7.9	153	17.3	2,426	274	3,100	350	5,225	590
F302_0135 MT10	13.38	7696/575	3,700	3,500	5,500	11/8	1.9	149	16.9	1,127	127	1,127	127	1,409	159
F302_0135 MT20	13.38	7696/575	3,500	3,500	5,000	11/8	2.5	152	17.2	2,607	294	3,100	350	5,758	650
F302_0135 MT30	13.38	7696/575	3,500	3,500	4,000	11/8	7.3	162	18.3	2,607	294	3,100	350	5,758	650
F302_0190 MT20	18.77	4900/261	3,500	3,100	5,000	11/6	3.1	175	19.8	2,918	329	3,986	450	7,086	800
F302_0190 MT30	18.77	4900/261	3,500	3,100	4,000	11/6	7.9	182	20.5	2,918	329	3,986	450	7,086	800
F302_0240 MT20	23.52	588/25	3,500	3,100	5,000	11/6	2.6	182	20.5	3,146	355	3,986	450	7,086	800
F302_0240 MT30	23.52	588/25	3,500	3,100	4,000	11/6	7.4	186	21.0	3,146	355	3,986	450	7,086	800
F302_0280 MT20	28.23	6860/243	3,500	3,500	5,000	11/6	2.2	185	20.9	3,343	377	3,986	450	7,086	800
F302_0280 MT30	28.23	6860/243	3,500	3,500	4,000	11/6	7.0	188	21.2	3,343	377	3,986	450	7,086	800
F302_0350 MT10	35.03	7252/207	3,700	3,500	5,500	11/6	1.3	187	21.1	2,951	333	2,951	333	3,689	416
F302_0350 MT20	35.03	7252/207	3,500	3,500	5,000	11/6	1.9	188	21.2	3,543	400	3,986	450	7,086	800
F302_0350 MT30	35.03	7252/207	3,500	3,500	4,000	11/6	6.7	190	21.4	3,543	400	3,986	450	7,086	800
F302_0470 MT10	47.19	1274/27	4,000	3,900	6,000	11/6	1.1	190	21.4	3,543	400	3,738	422	4,673	528
F302_0470 MT20	47.19	1274/27	3,500	3,500	5,000	11/6	1.7	190	21.5	3,543	400	3,986	450	7,086	800
F302_0470 MT30	47.19	1274/27	3,500	3,500	4,000	11/6	6.5	191	21.6	3,543	400	3,986	450	7,086	800
F302_0560 MT10	56.49	4067/72	4,000	3,900	6,000	11/6	1.0	191	21.6	3,543	400	3,986	450	5,414	611
F302_0560 MT20	56.49	4067/72	3,500	3,500	5,000	11/6	1.6	191	21.6	3,543	400	3,986	450	7,086	800
F302_0560 MT30	56.49	4067/72	3,500	3,500	4,000	11/6	6.4	192	21.7	3,543	400	3,986	450	7,086	800
F302_0700 MT10	70.36	2744/39	4,000	3,900	6,000	11/6	0.9	192	21.6	3,543	400	3,986	450	6,402	723
F302_0700 MT20	70.36	2744/39	3,500	3,500	5,000	11/6	1.5	192	21.7	3,543	400	3,986	450	7,086	800
F302_0700 MT30	70.36	2744/39	3,500	3,500	4,000	11/6	6.3	192	21.7	3,543	400	3,986	450	7,086	800
F302_0940 MT10	93.64	4214/45	4,000	3,900	6,000	11/6	0.8	192	21.7	3,543	400	3,986	450	7,086	800
F302_0940 MT20	93.64	4214/45	3,500	3,500	5,000	11/6	1.4	192	21.7	3,543	400	3,986	450	7,086	800
F302_0940 MT30	93.64	4214/45	3,500	3,500	4,000	11/6	6.2	193	21.8	3,543	400	3,986	450	7,086	800
F302_1130 MT10	112.8	3724/33	4,000	3,900	6,000	11/6	0.7	193	21.8	3,543	400	3,986	450	7,086	800
F302_1130 MT20	112.8	3724/33	3,500	3,500	5,000	11/6	1.3	193	21.8	3,543	400	3,986	450	7,086	800
F302_1410 MT10	140.6	7595/54	4,000	3,900	6,000	11/6	0.7	193	21.8	3,543	400	3,986	450	5,771	652
F303 with MT TriAdapt® Motor Adapter Continued Next Page															**Noise Level ≤ 53 dB(A) [4]**
F303_1820 MT20	182.4	73892/405	3,500	3,500	5,000	11/7	1.4	193	21.8	3,543	400	3,986	450	7,086	800
F303_1850 MT10	184.8	29939/162	4,000	3,900	6,000	11/7	0.7	193	21.8	3,543	400	3,986	450	7,086	800
F303_2180 MT20	218.4	117943/540	3,500	3,500	5,000	11/7	1.4	193	21.8	3,543	400	3,986	450	7,086	800
F303_2210 MT10	221.2	191149/864	4,000	3,900	6,000	11/7	0.7	193	21.8	3,543	400	3,986	450	7,086	800

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"F" Series–Offset Helical ServoFit® Modular System Selection Data



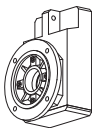
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
F303 with MT TriAdapt® Motor Adapter Continued															**Noise Level ≤ 53 dB(A)** [4]
F303_2720 MT20	272.1	159152/585	3,500	3,500	5,000	11/7	1.4	193	21.8	3,543	400	3,986	450	7,086	800
F303_2760 MT10	275.6	32242/117	4,000	3,900	6,000	11/7	0.7	193	21.8	3,543	400	3,986	450	7,086	800
F303_3620 MT20	362.1	244412/675	3,500	3,500	5,000	11/7	1.4	193	21.8	3,543	400	3,986	450	7,086	800
F303_3670 MT10	366.8	99029/270	4,000	3,900	6,000	11/7	0.7	193	21.8	3,543	400	3,986	450	7,086	800
F303_4420 MT10	442.0	43757/99	4,000	3,900	6,000	11/7	0.7	193	21.8	3,543	400	3,986	450	7,086	800
F303_5510 MT10	550.9	356965/648	4,000	3,900	6,000	11/7	0.7	193	21.8	3,543	400	3,986	450	5,771	651
F402 with MT TriAdapt® Motor Adapter Continued Next Page															**Noise Level ≤ 53 dB(A)** [4]
F402_0047 MT20	4.678	1408/301	2,700	2,300	4,000	10/7	16.0	88	9.9	1,608	182	1,769	200	2,683	303
F402_0047 MT30	4.678	1408/301	2,700	2,300	4,000	10/7	20.8	123	13.9	3,033	342	4,200	474	6,921	781
F402_0047 MT40	4.678	1408/301	2,700	2,300	3,500	10/7	24.8	186	21.0	3,033	342	4,872	550	6,921	781
F402_0058 MT20	5.813	3784/651	2,700	2,300	4,000	10/7	11.4	119	13.4	1,998	226	2,198	248	3,238	366
F402_0058 MT30	5.813	3784/651	2,700	2,300	4,000	10/7	16.2	159	17.9	3,260	368	4,872	550	8,353	943
F402_0058 MT40	5.813	3784/651	2,700	2,300	3,500	10/7	20.2	221	25.0	3,260	368	4,872	550	8,353	943
F402_0072 MT20	7.202	605/84	3,200	2,800	4,500	10/7	8.1	154	17.4	2,475	279	2,723	307	3,864	436
F402_0072 MT30	7.202	605/84	3,200	2,800	4,000	10/7	12.9	195	22.1	3,502	395	4,872	550	9,744	1,100
F402_0072 MT40	7.202	605/84	3,000	2,800	3,500	10/7	16.9	253	28.5	3,502	395	4,872	550	9,744	1,100
F402_0090 MT20	8.980	440/49	3,200	2,800	4,500	10/7	5.9	192	21.7	3,086	348	3,395	383	4,660	526
F402_0090 MT30	8.980	440/49	3,200	2,800	4,000	10/7	10.7	231	26.1	3,769	425	4,872	550	9,744	1,100
F402_0090 MT40	8.980	440/49	3,000	2,800	3,500	10/7	14.7	279	31.5	3,769	425	4,872	550	9,744	1,100
F402_0110 MT20	10.83	682/63	3,500	3,100	5,000	10/7	4.6	222	25.1	3,593	406	4,092	462	5,405	610
F402_0110 MT30	10.83	682/63	3,500	3,100	4,000	10/7	9.4	257	29.0	4,011	453	4,872	550	9,744	1,100
F402_0110 MT40	10.83	682/63	3,000	3,000	3,500	10/7	13.4	296	33.4	4,011	453	4,872	550	9,744	1,100
F402_0135 MT20	13.57	5984/441	3,500	3,100	5,000	10/7	3.5	255	28.8	3,941	445	4,872	550	6,552	740
F402_0135 MT30	13.57	5984/441	3,500	3,100	4,000	10/7	8.3	283	31.9	4,325	488	4,872	550	9,744	1,100
F402_0135 MT40	13.57	5984/441	3,000	3,000	3,500	10/7	12.3	311	35.2	4,325	488	4,872	550	9,744	1,100
F402_0185 MT20	18.62	3575/192	3,200	2,800	4,500	10/5	4.5	290	32.7	4,806	543	6,201	700	9,990	1,128
F402_0185 MT30	18.62	3575/192	3,200	2,800	4,000	10/5	9.3	308	34.8	4,806	543	6,201	700	12,401	1,400
F402_0185 MT40	18.62	3575/192	3,000	2,800	3,500	10/5	13.3	325	36.7	4,806	543	6,201	700	12,401	1,400
F402_0230 MT20	23.21	325/14	3,200	2,800	4,500	10/5	3.6	307	34.6	5,173	584	6,201	700	12,046	1,360
F402_0230 MT30	23.21	325/14	3,200	2,800	4,000	10/5	8.4	320	36.1	5,173	584	6,201	700	12,401	1,400
F402_0230 MT40	23.21	325/14	3,000	2,800	3,500	10/5	12.4	331	37.4	5,173	584	6,201	700	12,401	1,400
F402_0280 MT20	27.99	2015/72	3,500	3,100	5,000	10/5	3.0	317	35.8	5,505	622	6,201	700	12,401	1,400
F402_0280 MT30	27.99	2015/72	3,500	3,100	4,000	10/5	7.8	326	36.9	5,505	622	6,201	700	12,401	1,400
F402_0280 MT40	27.99	2015/72	3,000	3,000	3,500	10/5	11.8	335	37.8	5,505	622	6,201	700	12,401	1,400
F402_0350 MT20	35.08	2210/63	3,500	3,100	5,000	10/5	2.5	326	36.8	5,936	670	6,201	700	12,401	1,400
F402_0350 MT30	35.08	2210/63	3,500	3,100	4,000	10/5	7.3	332	37.5	5,936	670	6,201	700	12,401	1,400
F402_0350 MT40	35.08	2210/63	3,000	3,000	3,500	10/5	11.3	338	38.1	5,936	670	6,201	700	12,401	1,400
F402_0470 MT20	46.94	845/18	3,500	3,500	5,000	10/5	2.0	333	37.6	6,201	700	6,201	700	12,401	1,400
F402_0470 MT30	46.94	845/18	3,500	3,500	4,000	10/5	6.8	337	38.0	6,201	700	6,201	700	12,401	1,400
F402_0470 MT40	46.94	845/18	3,000	3,000	3,500	10/5	10.8	340	38.4	6,201	700	6,201	700	12,401	1,400

Motor Shaft

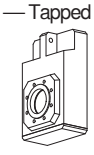
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48

Housing Styles

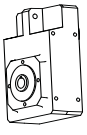
F — Round Flange



G — Tapped Holes



GN — Foot Mount



The "F" Housing Style is available as Hollow (A) or Solid (V) Output.
"G" style is Hollow (A) or Bushing (W).

See Page 104 for required ordering information and part number example.



"F" Series–Offset Helical ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
							J_1	C_2		$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
F402 with MT TriAdapt® Motor Adapter Continued											**Noise Level ≤ 53 dB(A)** [4]				
F402_0560 MT20	55.97	2015/36	3,500	3,500	5,000	10/5	1.8	336	37.9	6,201	700	6,201	700	12,401	1,400
F402_0560 MT30	55.97	2015/36	3,500	3,500	4,000	10/5	6.6	338	38.2	6,201	700	6,201	700	12,401	1,400
F402_0560 MT40	55.97	2015/36	3,000	3,000	3,500	10/5	10.6	341	38.5	6,201	700	6,201	700	12,401	1,400
F402_0700 MT20	70.06	1261/18	3,500	3,500	5,000	10/5	1.6	338	38.2	6,201	700	6,201	700	12,401	1,400
F402_0700 MT30	70.06	1261/18	3,500	3,500	4,000	10/5	6.4	340	38.4	6,201	700	6,201	700	12,401	1,400
F402_0700 MT40	70.06	1261/18	3,000	3,000	3,500	10/5	10.4	341	38.5	6,201	700	6,201	700	12,401	1,400
F402_0930 MT20	93.33	280/3	3,500	3,500	5,000	10/5	1.5	340	38.4	6,201	700	6,201	700	12,401	1,400
F402_0930 MT30	93.33	280/3	3,500	3,500	4,000	10/5	6.3	341	38.5	6,201	700	6,201	700	12,401	1,400
F402_1120 MT20	112.3	1235/11	3,500	3,500	5,000	10/5	1.4	341	38.5	6,201	700	6,201	700	12,401	1,400
F402_1120 MT30	112.3	1235/11	3,500	3,500	4,000	10/5	6.2	342	38.6	6,201	700	6,201	700	12,401	1,400
F402_1400 MT20	139.8	559/4	3,500	3,500	5,000	10/5	1.3	342	38.6	6,201	700	6,201	700	11,262	1,271
F403 with MT TriAdapt® Motor Adapter											**Noise Level ≤ 53 dB(A)** [4]				
F403_1820 MT20	181.5	4901/27	3,500	3,500	5,000	10/6	1.4	342	38.6	6,201	700	6,201	700	12,401	1,400
F403_1840 MT10	183.9	39715/216	3,800	3,500	5,500	10/6	0.7	342	38.6	6,201	700	6,201	700	8,334	941
F403_2160 MT20	216.4	11687/54	3,500	3,500	5,000	10/6	1.4	342	38.6	6,201	700	6,201	700	12,401	1,400
F403_2190 MT10	219.2	94705/432	3,800	3,500	5,500	10/6	0.7	342	38.6	6,201	700	6,201	700	9,937	1,122
F403_2710 MT20	270.9	36569/135	3,500	3,500	5,000	10/6	1.4	342	38.7	6,201	700	6,201	700	12,401	1,400
F403_2740 MT10	274.4	59267/216	3,800	3,500	5,500	10/6	0.7	342	38.7	6,201	700	6,201	700	12,401	1,400
F403_3610 MT20	360.9	3248/9	3,500	3,500	5,000	10/6	1.4	343	38.7	6,201	700	6,201	700	12,401	1,400
F403_3660 MT10	365.6	3290/9	3,800	3,500	5,500	10/6	0.7	343	38.7	6,201	700	6,201	700	12,401	1,400
F403_4340 MT20	434.1	14326/33	3,500	3,500	5,000	10/6	1.4	343	38.7	6,201	700	6,201	700	12,401	1,400
F403_4400 MT10	439.7	58045/132	3,800	3,500	5,500	10/6	0.7	343	38.7	6,201	700	6,201	700	12,401	1,400
F403_5470 MT10	547.4	26273/48	3,800	3,500	5,500	10/6	0.7	343	38.7	6,201	700	6,201	700	11,261	1,271
F602 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 61 dB(A)** [4]				
F602_0045 MT30	4.546	1273/280	2,500	2,100	3,500	10/7	42.2	141	16.0	3,711	419	4,082	461	6,998	790
F602_0045 MT40	4.546	1273/280	2,500	2,100	3,500	10/7	46.2	240	27.1	5,020	567	5,598	632	6,998	790
F602_0057 MT30	5.673	1407/248	2,500	2,100	3,500	10/7	30.5	196	22.2	4,631	523	5,094	575	8,472	956
F602_0057 MT40	5.673	1407/248	2,500	2,100	3,500	10/7	34.5	310	34.9	5,405	610	6,778	765	8,472	956
F602_0072 MT30	7.159	3551/496	2,900	2,500	4,000	10/7	22.2	265	29.9	5,840	659	6,428	726	10,287	1,161
F602_0072 MT40	7.159	3551/496	2,900	2,500	3,500	10/7	26.2	384	43.3	5,840	659	8,230	929	10,287	1,161
F602_0090 MT20	8.995	1943/216	2,900	2,500	4,000	10/7	12.1	260	29.4	3,091	349	3,401	384	4,823	545
F602_0090 MT30	8.995	1943/216	2,900	2,500	4,000	10/7	16.9	338	38.1	6,302	711	8,077	912	12,440	1,404
F602_0090 MT40	8.995	1943/216	2,900	2,500	3,500	10/7	20.9	450	50.9	6,302	711	8,858	1,000	12,440	1,404
F602_0110 MT20	10.82	2077/192	3,300	2,800	4,500	10/7	9.1	319	36.0	3,718	420	4,090	462	5,632	636
F602_0110 MT30	10.82	2077/192	3,300	2,800	4,000	10/7	13.9	396	44.7	6,702	757	8,858	1,000	14,173	1,600
F602_0110 MT40	10.82	2077/192	3,000	2,800	3,500	10/7	17.9	497	56.1	6,702	757	8,858	1,000	14,173	1,600
F602_0135 MT20	13.61	871/64	3,300	2,800	4,500	10/7	6.6	392	44.2	4,451	502	5,145	581	6,770	764
F602_0135 MT30	13.61	871/64	3,300	2,800	4,000	10/7	11.4	461	52.1	7,235	817	8,858	1,000	14,173	1,600
F602_0135 MT40	13.61	871/64	3,000	2,800	3,500	10/7	15.4	542	61.2	7,235	817	8,858	1,000	14,173	1,600

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A) Measured at 1 meter distance with 3000 RPM input.

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 3, 4
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL5 and EL6
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL3, EL4
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"F" Series–Offset Helical ServoFit® Modular System Selection Data



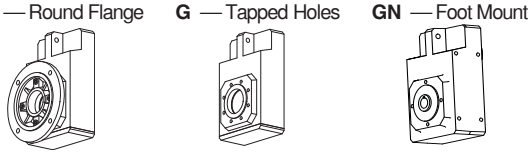
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
F602 with MT TriAdapt® Motor Adapter Continued															**Noise Level ≤ 61 dB(A) [4]**
F602_0185 MT30	18.52	3445/186	2,900	2,500	4,000	10/5	13.6	558	63.0	8,018	905	9,744	1,100	17,716	2,000
F602_0185 MT40	18.52	3445/186	2,900	2,500	3,500	10/5	17.6	619	69.8	8,018	905	9,744	1,100	17,716	2,000
F602_0230 MT20	23.27	1885/81	2,900	2,500	4,000	10/5	6.6	555	62.7	7,998	903	8,798	993	12,479	1,409
F602_0230 MT30	23.27	1885/81	2,900	2,500	4,000	10/5	11.4	599	67.6	8,652	977	9,744	1,100	17,716	2,000
F602_0230 MT40	23.27	1885/81	2,900	2,500	3,500	10/5	15.4	642	72.4	8,652	977	9,744	1,100	17,716	2,000
F602_0280 MT20	27.99	2015/72	3,300	2,800	4,500	10/5	5.4	590	66.6	9,200	1,039	9,744	1,100	14,571	1,645
F602_0280 MT30	27.99	2015/72	3,300	2,800	4,000	10/5	10.2	623	70.4	9,200	1,039	9,744	1,100	17,716	2,000
F602_0280 MT40	27.99	2015/72	3,000	2,800	3,500	10/5	14.2	654	73.9	9,200	1,039	9,744	1,100	17,716	2,000
F602_0350 MT20	35.21	845/24	3,300	2,800	4,500	10/5	4.2	622	70.2	9,744	1,100	9,744	1,100	17,514	1,977
F602_0350 MT30	35.21	845/24	3,300	2,800	4,000	10/5	9.0	645	72.8	9,744	1,100	9,744	1,100	17,716	2,000
F602_0350 MT40	35.21	845/24	3,000	2,800	3,500	10/5	13.0	666	75.1	9,744	1,100	9,744	1,100	17,716	2,000
F602_0470 MT20	46.72	1495/32	3,500	3,200	5,000	10/5	3.1	648	73.1	9,744	1,100	9,744	1,100	17,716	2,000
F602_0470 MT30	46.72	1495/32	3,500	3,200	4,000	10/5	7.9	662	74.7	9,744	1,100	9,744	1,100	17,716	2,000
F602_0470 MT40	46.72	1495/32	3,000	3,000	3,500	10/5	11.9	674	76.1	9,744	1,100	9,744	1,100	17,716	2,000
F602_0560 MT20	55.71	390/7	3,500	3,200	5,000	10/5	2.7	659	74.3	9,744	1,100	9,744	1,100	17,716	2,000
F602_0560 MT30	55.71	390/7	3,500	3,200	4,000	10/5	7.5	669	75.5	9,744	1,100	9,744	1,100	17,716	2,000
F602_0560 MT40	55.71	390/7	3,000	3,000	3,500	10/5	11.5	677	76.5	9,744	1,100	9,744	1,100	17,716	2,000
F602_0700 MT20	69.64	975/14	3,500	3,200	5,000	10/5	2.2	668	75.4	9,744	1,100	9,744	1,100	17,716	2,000
F602_0700 MT30	69.64	975/14	3,500	3,200	4,000	10/5	7.0	675	76.2	9,744	1,100	9,744	1,100	17,716	2,000
F602_0700 MT40	69.64	975/14	3,000	3,000	3,500	10/5	11.0	680	76.8	9,744	1,100	9,744	1,100	17,716	2,000
F602_0930 MT20	93.33	280/3	3,500	3,200	5,000	10/5	1.8	676	76.3	9,744	1,100	9,744	1,100	17,716	2,000
F602_0930 MT30	93.33	280/3	3,500	3,200	4,000	10/5	6.6	679	76.7	9,744	1,100	9,744	1,100	17,716	2,000
F602_0930 MT40	93.33	280/3	3,000	3,000	3,500	10/5	10.6	683	77.1	9,744	1,100	9,744	1,100	17,716	2,000
F602_1120 MT20	112.2	9425/84	3,500	3,200	5,000	10/5	1.6	679	76.6	9,744	1,100	9,744	1,100	17,716	2,000
F602_1120 MT30	112.2	9425/84	3,500	3,200	4,000	10/5	6.4	681	76.9	9,744	1,100	9,744	1,100	17,716	2,000
F602_1400 MT20	139.8	559/4	3,500	3,200	5,000	10/5	1.5	681	76.9	9,744	1,100	9,744	1,100	17,716	2,000
F602_1400 MT30	139.8	559/4	3,500	3,200	4,000	10/5	6.3	683	77.1	9,744	1,100	9,744	1,100	17,716	2,000
F603 with MT TriAdapt® Motor Adapter															**Noise Level ≤ 61 dB(A) [4]**
F603_1810 MT20	180.6	8671/48	3,500	3,200	5,000	10/6	1.5	683	77.1	9,744	1,100	9,744	1,100	17,716	2,000
F603_2150 MT20	215.4	1508/7	3,500	3,200	5,000	10/6	1.5	684	77.2	9,744	1,100	9,744	1,100	17,716	2,000
F603_2690 MT20	269.3	1885/7	3,500	3,200	5,000	10/6	1.4	684	77.2	9,744	1,100	9,744	1,100	17,716	2,000
F603_3610 MT20	360.9	3248/9	3,500	3,200	5,000	10/6	1.4	685	77.3	9,744	1,100	9,744	1,100	17,716	2,000
F603_4340 MT20	433.8	54665/126	3,500	3,200	5,000	10/6	1.4	685	77.3	9,744	1,100	9,744	1,100	17,716	2,000
F603_5400 MT20	540.4	16211/30	3,500	3,200	5,000	10/6	1.4	685	77.3	9,744	1,100	9,744	1,100	17,716	2,000

Motor Shaft

Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48

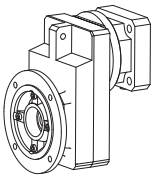
Housing Styles

F — Round Flange **G** — Tapped Holes **GN** — Foot Mount



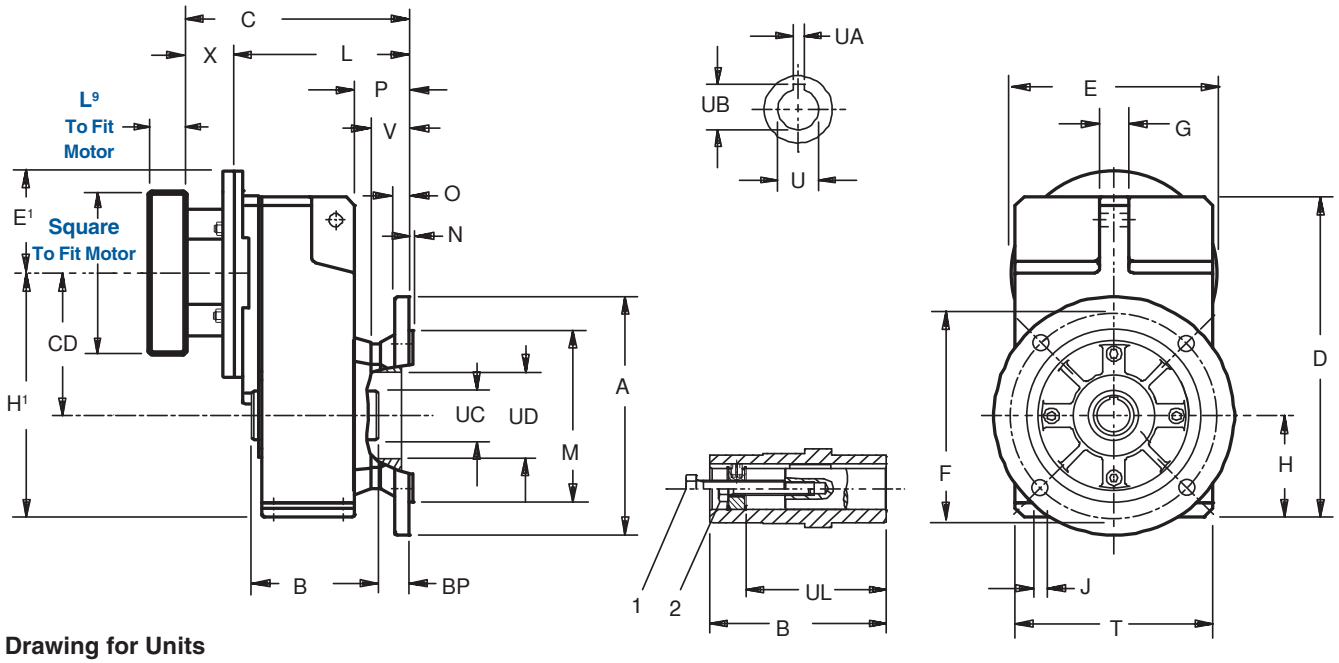
The "F" Housing Style is available as Hollow (A) or Solid (V) Output.
"G" style is Hollow (A) or Bushing (W).

See Page 104 for required ordering information and part number example.



ServoFit® "F" Series–Offset Helical Round Flange – "F" Housing Hollow Output – Dimensional Data

See Page 163 for installation of hollow ouput.



Drawing for Units
F102AF — F603AF

Table No. 1 **"F" Series –Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	CD	A	B	D	F	G	H	H1	J	M	N	O	P	T	BP	UC	UD	UL	1
F102	4.02	6.30	3.74	9.37	5.12	.79	2.91	6.93	.43	4.331 +.001/-.0004	.14	.39	1.75	5.71	1.00	1.38	2.05	2.87	3/8-16
F202/F203	5.16	7.87	4.53	11.77	6.50	.87	3.66	8.82	.43	5.118 +.001/-.0004	.14	.55	2.09	7.09	1.18	1.77	2.56	3.62	1/2-13
F302/F303	5.89	9.84	5.12	13.23	8.46	1.18	4.17	10.06	.55	7.087 +.001/-.0004	.16	.59	2.22	8.11	1.24	1.97	2.83	4.06	1/2-13
F402/F403	6.65 [1]	9.84	5.71	14.57	8.46	1.18	4.57	11.22	.55	7.087 +.001/-.0004	.16	.59	2.22	9.06	1.24	2.17	2.83	4.49	3/4-10
F602/F603	7.72	11.81	7.09	17.64	10.43	1.38	5.39	13.11	.87	9.055 +.001/-.001	.16	.67	2.38	10.43	1.16	2.76	3.15	5.63	3/4-10

[1] C.D. is 5.19 for F403 with MT20.

1. Removal Bolt – not supplied.
2. Mounting Bolt – must be smaller than removal bolt.

Table No. 2 **Metric output available on request**

Base Module	Standard Bore - inches			Optional Bore - mm		
	U	UA	UB	U	UA	UB
F102	.750	.187	.84	20H7	6JS9	22.8
F202/F203	1.000	.250	1.12	25H7	8JS9	28.3
F302/F303	1.250	.250	1.37	30H7	8JS9	33.3
F402/F403	1.500	.375	1.67	40H7	12JS9	43.3
F602/F603	2.000	.500	2.23	40H7	14JS9	53.8

See web site for drawings.

ServoFit® "F" Series–Offset Helical Round Flange – "F" Housing Hollow Output – Dimensional Data

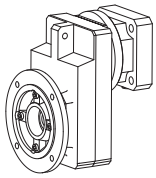


Table No. 3

"F" Series – Unit Dimensions (Inches) – "F" Housing Style

Base Module	MT10		MT20		MT30		MT40		Approx. Wt. lbs.
	C	L	C	L	C	L	C	L	
F102	6.67	5.10	7.23	5.26	–	–	–	–	38
F202	7.59	6.02	8.15	6.18	9.62	6.26	–	–	51
F203	9.05	7.48	–	–	–	–	–	–	64
F302	8.24	6.67	8.80	6.83	9.27	6.91	–	–	67
F303	9.70	8.13	10.49	8.52	–	–	–	–	73
F402	–	–	14.62	7.42	9.86	7.50	11.12	7.62	84
F403	10.29	8.72	11.08	9.11	–	–	–	–	91
F602	–	–	10.61	8.64	11.08	8.72	12.34	8.84	165
F603	–	–	12.30	10.33	–	–	–	–	177

Table No. 4 **"MT" Motor Plate Dimensions**

Motor Adapter	Motor Shaft D[6] Max. [1]		Motor Plate [2] Thickness L[9] Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E[2]	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18

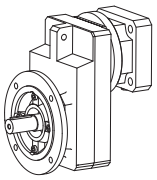
[1] If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
[2] Motor plate maximum thickness (L[9]) will vary with motor shaft length but will not be less than shown.

For approximate weight, add base module weight form Table 3 and adapter weight from Table 4.

Part No. Example

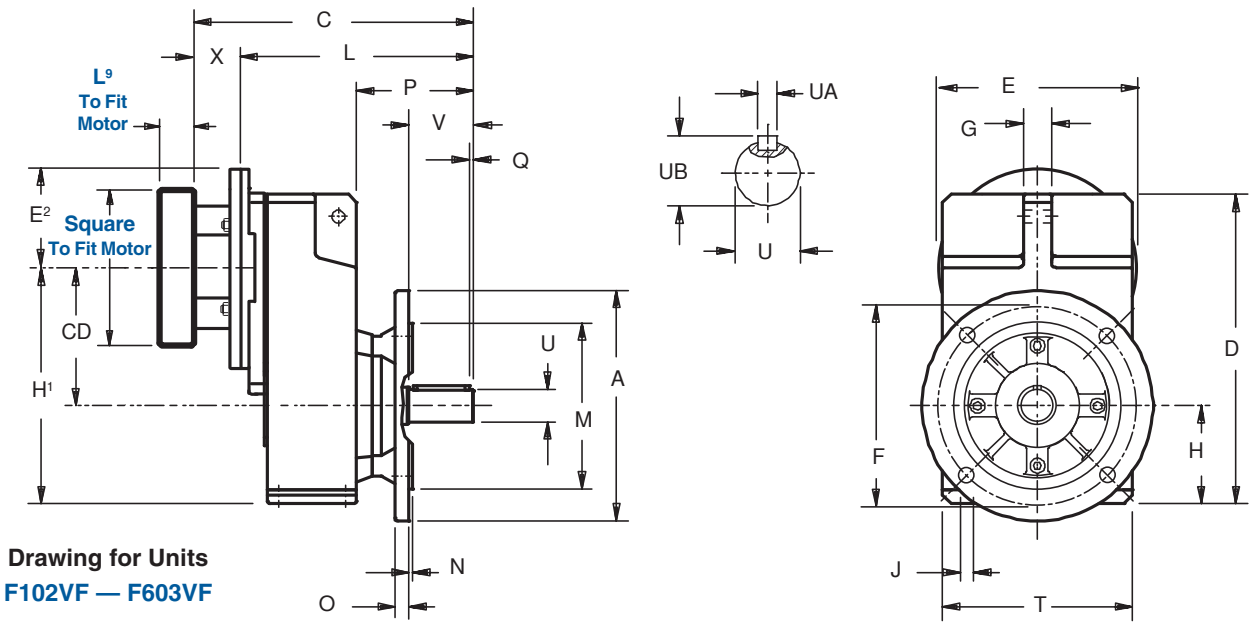
Round Flange Unit with TriAdapt® Motor Adapter

F302AF0620 MT20



ServoFit® "F" Series–Offset Helical Round Flange – "F" Housing Shaft Output – Dimensional Data

NOTE: Solid output shaft is ONLY available with an output flange.



Drawing for Units
F102VF — F603VF

Table No. 1 **"F" Series – Round Flange Dimensions (Inches) – "F" Housing Style**

Base Module	CD	A	D	F	G	H	H1	J	M	N	O	P	Q	T	V
F102	4.02	6.30	9.37	5.12	.79	2.91	6.93	.35	4.331 +.001/-.0004	.14	.39	3.80	.16	5.71	1.97
F202/F203	5.16	7.87	11.77	6.50	.87	3.66	8.82	.43	5.118 +.001/-.0004	.14	.55	4.53	.16	7.09	2.36
F302/F303	5.89	9.84	13.23	8.46	1.18	4.17	10.06	.55	7.087 +.001/-.0004	.16	.59	5.10	.16	8.11	2.76
F402/F403	6.65 [1]	9.84	14.57	8.46	1.18	4.57	11.22	.55	7.087 +.001/-.0004	.16	.59	5.49	.16	9.06	3.15
F602/F603	7.72	11.81	17.64	10.43	1.38	5.39	13.11	.55	9.055 +.001/-.001	.16	.67	6.44	.20	10.43	3.94

[1] C.D. is 5.19 for F403 with MT20.

Table No. 2 **Metric output available on request**

Base Module	Standard Shaft - inches			Optional Shaft - mm		
	U	UA	UB	U	UA	UB
F102	1.000	1/4 × 1/4 × 1 9/16	1.11	25k6	A8x7x40	28
F202/F203	1.250	1/4 × 1/4 × 1 15/16	1.36	30k6	A8x7x50	33
F302/F303	1.375	5/16 × 5/16 × 2 5/16	1.51	35k6	A10x8X60	38
F402/F403	1.625	3/8 × 3/8 × 2 7/8	1.79	40k6	A12x8X70	43
F602/F603	2.125	1/2 × 1/2 × 3 5/32	2.35	50k6	A14x9X90	53.5

See web site for drawings.

ServoFit® "F" Series–Offset Helical Round Flange – "F" Housing Shaft Output – Dimensional Data

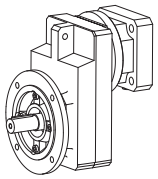


Table No. 3 "F" Series–"F" Housing Style

Base Module	MT10 C	MT10 L	MT20 C	MT20 L	MT30 C	MT30 L	MT40 C	MT40 L	Approx. Wt. lbs.
F102	8.66	7.09	9.21	7.24	–	–	–	–	38
F202	9.96	8.39	10.51	8.54	10.98	8.62	–	–	51
F203	11.41	9.84	–	–	–	–	–	–	64
F302	11.02	9.45	11.58	9.61	12.05	9.69	–	–	67
F303	12.48	10.91	13.25	11.28	–	–	–	–	73
F402	–	–	12.56	10.59	13.03	10.67	14.29	10.79	84
F403	13.46	11.89	14.25	12.28	–	–	–	–	91
F602	–	–	14.57	12.60	15.04	12.68	16.30	12.80	165
F603	–	–	16.26	14.29	–	–	–	–	177

Table No. 4 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D^6 Max. [1] mm	Motor Shaft D^6 Max. [1] ins.	Motor Plate [2] Thickness L^9 Minimum mm	Motor Plate [2] Thickness L^9 Minimum inches	Inches E	Inches E^2	Inches X	Wt. lbs.
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18

[1] If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
[2] Motor plate maximum thickness (L^9) will vary with motor shaft length but will not be less than shown.

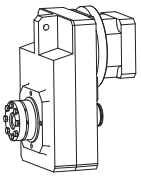
For approximate weight, add base module weight form Table 3 and adapter weight from Table 4.

Part No. Example

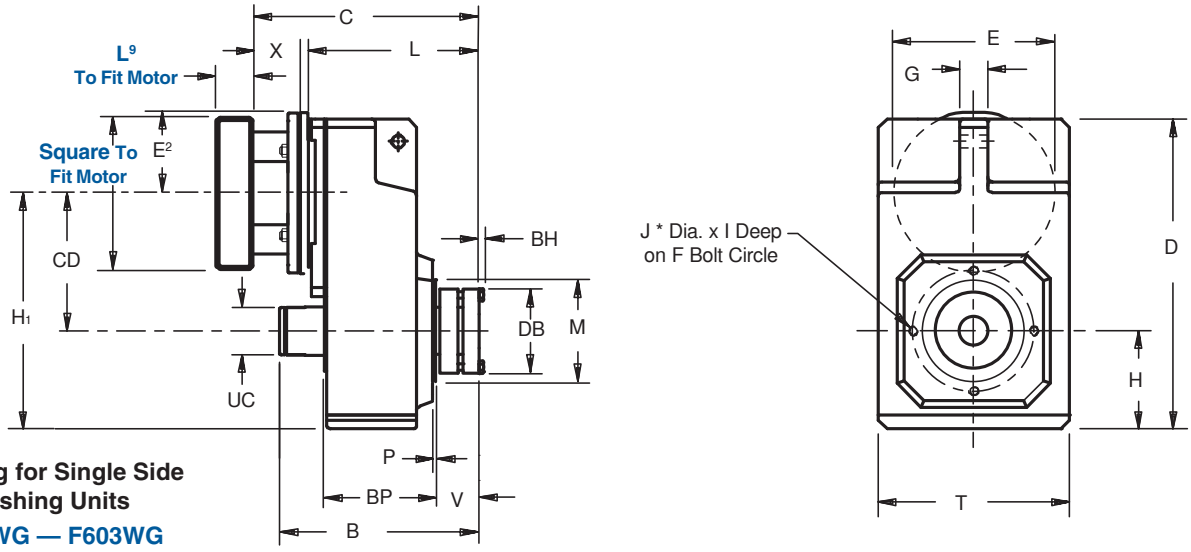
Round Flange with TriAdapt® Motor Adapter

F302VF0620 MT20

See web site for drawings.



ServoFit® "F" Series–Offset Helical Tapped Hole – "G" Housing Single Bushing – Dimensional Data



Drawing for Single Side Bushing Units
F102WG — F603WG

Important: For ease of installation, a 1/32 x 45° chamfer (minimum) is recommended for the output shaft end.

Table No. 1 "F" Series – Single Side Wobble Free Bushing Unit Dimensions (Inches)

Base Module	CD	B	D	F	G	H	H_1	I	J *	M	P	T	V	BH	BP	DB	UC	Bushing Capscrews No.—Size Metric	Tight Torque in.lbs	Tight Torque Nm
F102	4.02	6.40	9.37	3.54	.79	2.91	6.93	.51	M8	2.953	.10	5.71	1.18	.16	3.43	2.68	1.35	6—M6x25	89	10
F202/F203	5.16	7.26	11.77	4.53	.87	3.66	8.82	.51	M8	3.740	.12	7.09	1.54	.16	4.13	3.07	1.74	8—M6x30	89	10
F302/F303	5.89	7.95	13.23	5.12	1.18	4.17	10.06	.63	M10	4.331	.14	8.11	1.54	.16	4.72	3.31	1.90	8—M6x30	89	10
F402/F403	6.65 [1]	8.93	14.57	5.12	1.18	4.57	11.22	.63	M10	4.331	.14	9.06	1.78	.20	5.31	3.82	2.14	8—M8x30	221	25
F602/F603	7.72	10.24	17.64	6.50	1.38	5.39	13.11	.63	M10	5.118	.14	10.43	1.77	.24	6.54	4.13	2.53	8—M10x35	434	49

*F602 and F603 has 8 tapped holes instead of 4 as shown on drawing.
[1] C.D. is 5.19 for F403 with MT20.

Table No. 2 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D^6 Max. [1] mm	Motor Shaft D^6 Max. [1] ins.	Motor Plate [2] Thickness L^9 Minimum mm	Motor Plate [2] Thickness L^9 Minimum inches	Inches E	Inches E^2	Inches X	Wt. lbs.
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18

[1] If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
[2] Motor plate maximum thickness (L^9) will vary with motor shaft length but will not be less than shown.

Table No. 3 "F" Series–"F" Housing Style

Base Module	MT10 C	MT10 L	MT20 C	MT20 L	MT30 C	MT30 L	MT40 C	MT40 L	Approx. Wt. lbs.
F102	8.66	7.09	9.21	7.24	—	—	—	—	38
F202	9.96	8.39	10.51	8.54	10.98	8.62	—	—	51
F203	11.41	9.84	—	—	—	—	—	—	64
F302	11.02	9.45	11.58	9.61	12.05	9.69	—	—	67
F303	12.48	10.91	13.25	11.28	—	—	—	—	73
F402	—	—	12.56	10.59	13.03	10.67	14.29	10.79	84
F403	13.46	11.89	14.25	12.28	—	—	—	—	91
F602	—	—	14.57	12.60	15.04	12.68	16.30	12.80	165
F603	—	—	16.26	14.29	—	—	—	—	177

See web site for drawings.

ServoFit® "F" Series–Offset Helical Tapped Hole – "G" Housing Single Bushing – Dimensional Data

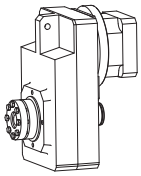


Table No. 4 **"WF" Single Side Bushings – Inches**

Base Module	Stock Bores Sizes												
	3/4	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2
F102	WF1-075	–	–	–	–	–	–	–	–	–	–	–	–
F202/F203	–	WF2-100	WF2-103	–	–	–	–	–	–	–	–	–	–
F302/F303	–	WF3-100	WF3-103	WF3-104	WF3-106	WF3-107	WF3-108	–	–	–	–	–	–
F402/F403	–	WF4-100	WF4-103	WF4-104	WF4-106	WF4-107	WF4-108	–	–	–	–	–	–
F602/F603	–	–	–	–	–	WF5-107	WF5-108	WF5-110	WF5-111	WF5-112	WF5-114	WF5-115	WF5-200

A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the reducer. The bushing will accept a shaft with a tolerance of +.000/-.005.

NOTE: F6 units use a WF5 Bushing Kit.

Table No. 5 "WF" Bushing Single Side without Covers – Metric

Unit	Stock Bores Sizes		
	20	30	35
F102	WF1-20	–	–
F202	–	WF2-30	–
F302	–	WF3-30	WF3-35

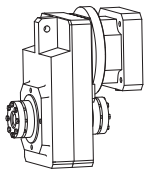
Part No. Example

Unit with TriAdapt® Motor Adapter, 1 3/8" Bore, Single Bushing

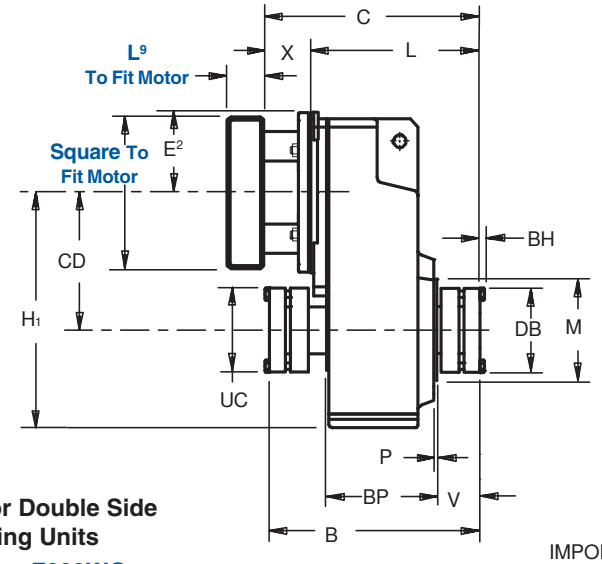
F402WG0560 MT20 WF4–106

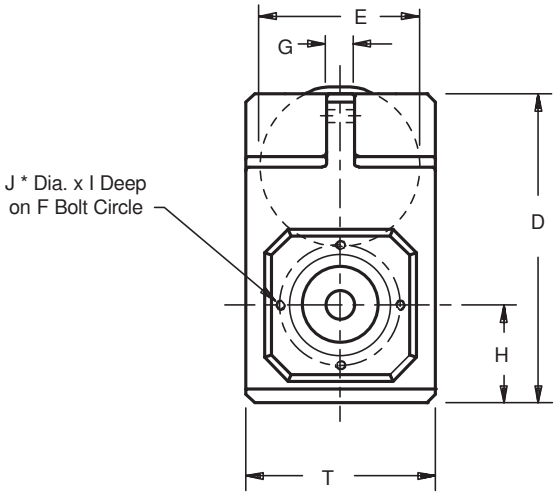
For an approximate unit weight, add the weights in Table 2 and Table 3.

See web site for drawings.



ServoFit® "F" Series–Offset Helical Tapped Hole – "G" Housing Double Bushing – Dimensional Data





Drawing for Double Side Bushing Units

F102WG – F602WG

IMPORTANT: A 1/32 x 45° chamfer minimum is recommended for the shaft end.
The bushing will accept a shaft with a tolerance of +.000/-.005.
The double bushing cannot be mounted on sizes F203, F303, F403, or F603.

Table No. 1 "F" Series – Double Side Wobble Free Bushing Unit Dimensions (Inches)

Base Module	CD	B	D	F	G	H	H₁	I	J *	M	P	T	V	BH	BP	DB	Bushing Capscrews No.—Size Metric	Tight Torque in.lbs	Tight Torque Nm
F102	4.02	6.73	9.37	3.54	.79	2.91	6.93	.51	M8	2.953	.10	5.71	1.18	.16	3.43	2.68	6—M6x25	89	10
F202	5.16	7.77	11.77	4.53	.87	3.66	8.82	.51	M8	3.740	.12	7.09	1.54	.16	4.13	3.07	8—M6x30	89	10
F302	5.89	8.46	13.23	5.12	1.18	4.17	10.06	.63	M10	4.331	.14	8.11	1.54	.16	4.72	3.31	8—M6x30	89	10
F402	6.65	9.57	14.57	5.12	1.18	4.57	11.22	.63	M10	4.331	.14	9.06	1.78	.20	5.31	3.82	8—M8x30	221	25
F602	7.72	10.84	17.64	6.50	1.38	5.39	13.11	.63	M10	5.118	.14	10.43	1.77	.24	6.54	4.13	8—M10x35	434	49

*F602 has 8 tapped holes instead of 4 as shown on drawing.

Table No. 2 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D⁶ Max. [1] mm	Motor Shaft D⁶ Max. [1] ins.	Motor Plate [2] Thickness L⁹ Minimum mm	Motor Plate [2] Thickness L⁹ Minimum inches	Inches E	Inches E²	Inches X	Wt. lbs.
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18

[1] If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
[2] Motor plate maximum thickness (L⁹) will vary with motor shaft length but will not be less than shown.

Table No. 3 "F" Series–"F" Housing Style

Base Module	MT10 C	MT10 L	MT20 C	MT20 L	MT30 C	MT30 L	MT40 C	MT40 L	Approx. Wt. lbs.
F102	8.66	7.09	9.21	7.24	–	–	–	–	38
F202	9.96	8.39	10.51	8.54	10.98	8.62	–	–	51
F302	11.02	9.45	11.58	9.61	12.05	9.69	–	–	67
F402	–	–	12.56	10.59	13.03	10.67	14.29	10.79	84
F602	–	–	14.57	12.60	15.04	12.68	16.30	12.80	165

See web site for drawings.

ServoFit® "F" Series–Offset Helical Tapped Hole – "G" Housing Double Bushing – Dimensional Data

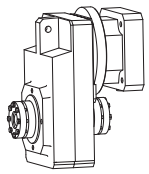


Table No. 4 "WFN" Double Side Bushings without Covers – Inches

	Stock Bores Sizes												
Unit	3/4	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2
F102	WFN1-075	–	–	–	–	–	–	–	–	–	–	–	–
F202	–	WFN2-100	WFN2-103	–	–	–	–	–	–	–	–	–	–
F302	–	WFN3-100	WFN3-103	WFN3-104	WFN3-106	WFN3-107	WFN3-108	–	–	–	–	–	–
F402	–	WFN4-100	WFN4-103	WFN4-104	WFN4-106	WFN4-107	WFN4-108	–	–	–	–	–	–
F602	–	–	–	–	–	WFN5-107	WFN5-108	WFN5-110	WFN5-111	WFN5-112	WFN5-114	WFN5-115	WFN5-200

A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the reducer.
The bushing will accept a shaft with a tolerance of +.000/-.005.

NOTE: F6 units use a WFN5 Bushing Kit.

Table No. 5 "WFN" Bushing Double Side without Covers – Metric

	Stock Bores Sizes			
Unit	20	30	35	40
F102	WFN1-20	–	–	–
F202	–	WFN2-30	–	–
F302	–	WFN3-30	WFN3-35	–
F402	–	–	–	WFN4-40
F602	–	–	–	WFN5-40

NOTE: F6 units use a WFN5 Bushing Kit.

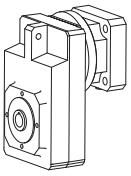
Part No. Explanation

Unit with TriAdapt® Motor Adapter 1 3/8" Bore Double Bushing — No Covers

F402WG0560 MT20 WFN4–106

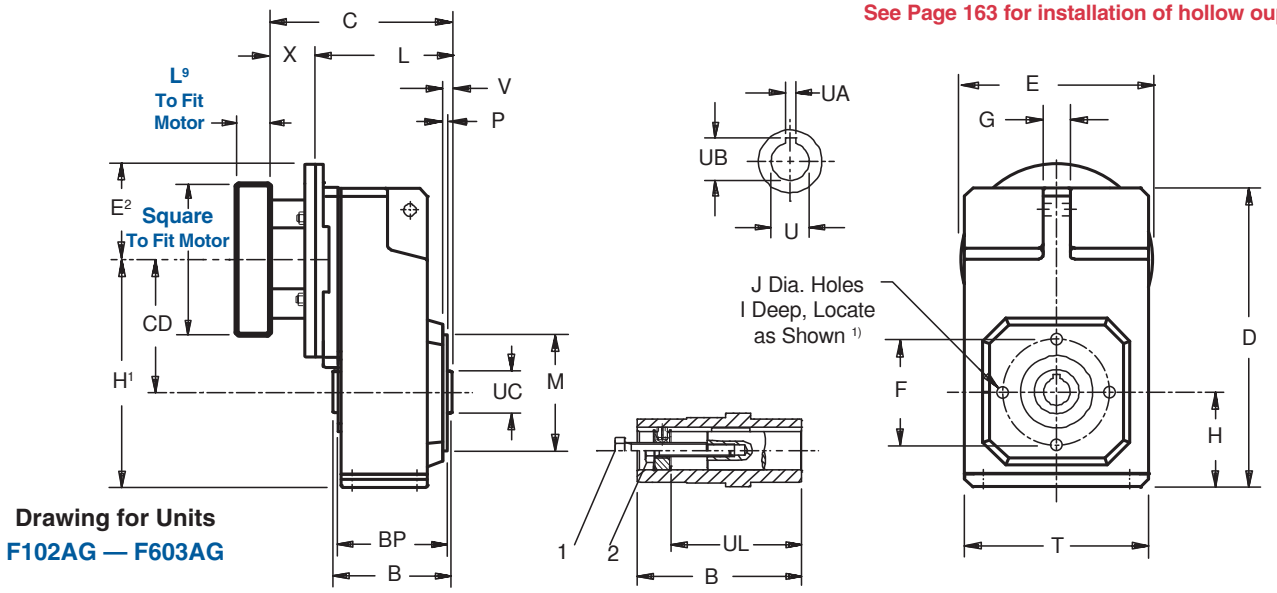
For an approximate unit weight, add the weights in Table 2 and Table 3.

See web site for drawings.



ServoFit® "F" Series–Offset Helical Tapped Hole – "G" Housing Hollow Output – Dimensional Data

See Page 163 for installation of hollow ouput.



Drawing for Units
F102AG — F603AG

Table No. 1 "F" Series – Tapped Holes Unit Dimensions (Inches) – "G" Housing Style

Base Module	CD	B	D	F	G	H	H1	I	J 1)	M	P	T	V	BP	UC	UL	1
F102	4.02	3.74	9.37	3.35	.79	2.91	6.93	.51	4-M8	2.756 +.001/-.0003	.10	5.71	.26	3.43	1.38	2.87	3/8-16
F202/F203	5.16	4.53	11.77	4.53	.87	3.66	8.82	.51	4-M8	3.740 +.001/-.0004	.12	7.09	.31	4.13	1.77	3.62	1/2-13
F302/F303	5.89	5.12	13.23	5.12	1.18	4.17	10.06	.63	4-M10	4.331 +.001/-.0004	.14	8.11	.33	4.72	1.97	4.06	1/2-13
F402/F403	6.65 2)	5.71	14.57	5.12	1.18	4.57	11.22	.63	4-M10	4.331 +.001/-.0004	.14	9.06	.33	5.31	2.17	4.49	3/4-10
F602/F603	7.72	7.09	17.64	6.50	1.38	5.39	13.11	.63	8-M10	5.118 +.001/-.0004	.14	10.43	.41	6.54	2.76	5.63	3/4-10

1) F602 and F603 has 8 tapped holes located 22.5° from horizontal instead of 4 as shown on drawing.
2) C.D. is 5.19 for F403 with MT20.
1. Removal Bolt – not supplied.
2. Mounting Bolt – must be smaller than removal bolt.

Table No. 2 Metric output available on request

Base Module	Standard Bore - inches			Optional Bore - mm		
	U	UA	UB	U	UA	UB
F102	.750	.187	.84	20H7	6JS9	22.8
F202/F203	1.000	.250	1.12	25H7	8JS9	28.3
F302/F303	1.250	.250	1.37	30H7	8JS9	33.3
F402/F403	1.500	.375	1.67	40H7	12JS9	43.3
F602/F603	2.000	.500	2.23	40H7	14JS9	53.8

Table No. 3 "F" Series – "G" Housing Style

Base	MT10		MT20		MT30		MT40		Approx.
Module	C	L	C	L	C	L	C	L	Wt. lbs.
F102	5.66	4.09	6.22	4.25	–	–	–	–	38
F202	6.41	4.84	6.97	5.00	7.44	5.08	–	–	51
F203	7.87	6.30	–	–	–	–	–	–	64
F302	7.00	5.43	7.56	5.59	8.03	5.67	–	–	67
F303	8.46	6.89	9.25	7.28	–	–	–	–	73
F402	–	–	8.15	6.18	8.62	6.26	9.88	6.38	84
F403	9.05	7.48	9.84	7.87	–	–	–	–	91
F602	–	–	9.45	7.48	9.92	7.56	11.18	7.68	165
F603	–	–	11.14	9.17	–	–	–	–	177

Table No. 4 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness L9 Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18

Part No. Example

Tapped Holes Housing with TriAdapt® Motor Adapter

F302AG0620 MT20

1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

For approximate weight, add base module weight form Table 3 and adapter weight from Table 4.

ServoFit® "F" Series–Offset Helical Tapped Hole – "GN" Housing Hollow Output – Dimensional Data

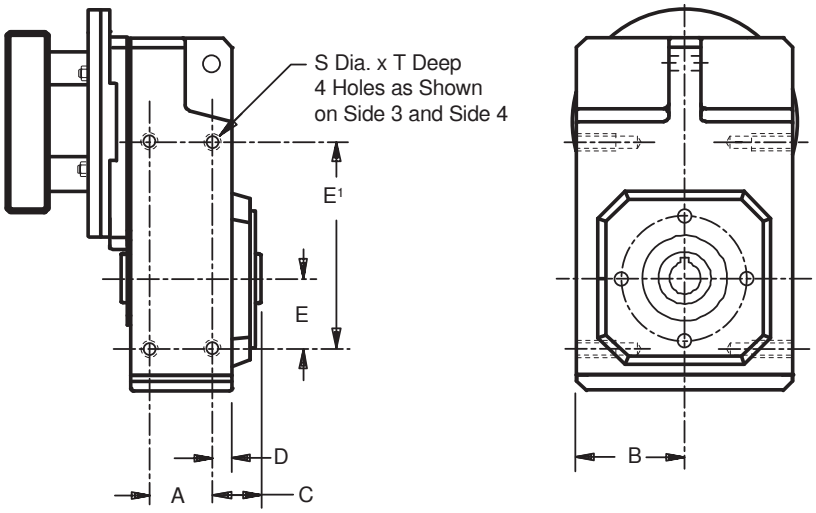


Table No. 1

"F" Series — Foot Mount "GN" Housing Dimensions (Inches)

Base Module	A	B	C	D	E	E¹	S	T
F102/F103	1.97	2.79	1.14	.39	1.57	5.51	M6	.43
F202/F203	2.52	3.46	1.32	.41	2.17	6.89	M8	.51
F302/F303	2.83	4.02	1.48	.49	2.36	7.87	M10	.63
F402/F403	3.43	4.49	1.48	49	2.76	8.66	M10	.63
F602/F603	4.25	5.16	1.83	.61	3.35	10.63	M12	.75

Rubber Buffer – Dimensional Data

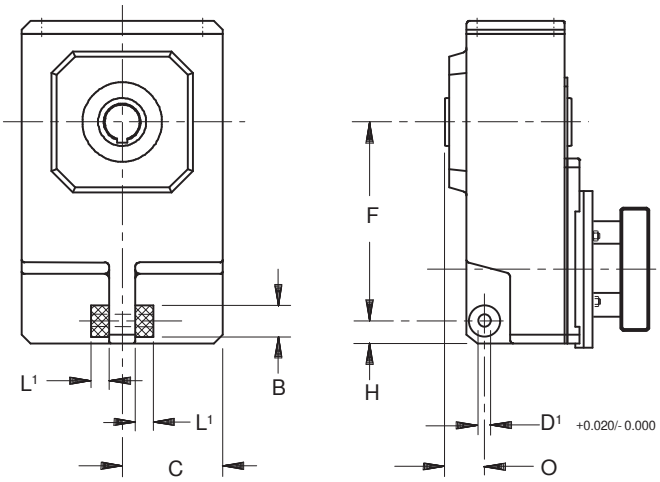


Table No. 2

"F" Series — Rubber Buffer Dimensions (Inches)

Base Module	Part No.	B	C	F	H	D¹	L¹	O
F102/F103	25192	1.18	2.86	5.91	.55	.43	.59	1.38
F202/F203	25192	1.18	3.55	7.12	.98	.43	.59	1.57
F302/F303	25193	1.57	4.06	8.07	.96	.55	.79	1.77
F402/F403	25193	1.57	4.53	8.98	1.02	.55	.79	1.77
F602/F603	25194	2.36	5.22	10.63	1.02	.57	1.18	2.77

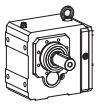
Order two (2) rubber buffers for each unit.
Torque arms are not supplied by STOBER.

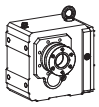
See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Overview

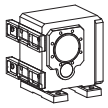
Output Style + Housing Style + TriAdapt® Input = Gearhead Configurations

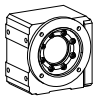

Style A
Hollow Output

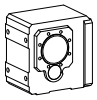

Style V
Solid Output

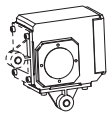

Style W
Bushing Output

+


Style N
Foot Mount


Style F
Round Flange


Style G
Tapped Holes

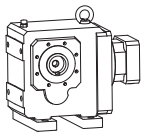

Style GD
Torque Arm Bracket

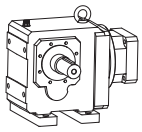
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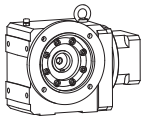

MT
Motor Adapter

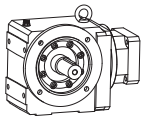

Motor Plate
Fit ANY Servo Motor

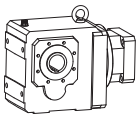
Gearhead Configurations

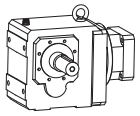

Style AN
Hollow Output

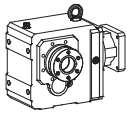

Style VN
Solid Output


Style AF
Hollow Output


Style VF
Solid Output

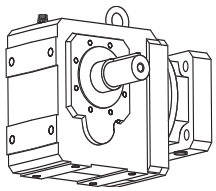

Style AG
Hollow Output


Style VG
Solid Output

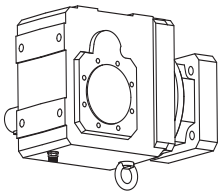

Style WG
Bushing Output

Mounting Positions *(Units shown with shaft on Side 4. See Page 171 for additional mounting information.)*

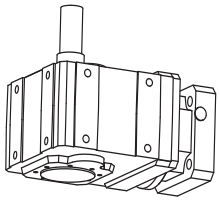
EL1



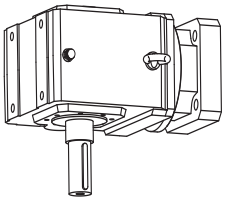
EL2



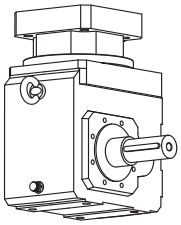
EL3



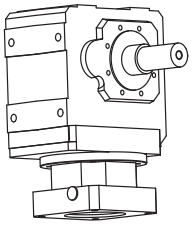
EL4



EL5



EL6



Part No. Explanation with OPTIONS and REQUIRED INFORMATION

K 6 1 3 A GD 0580 MT40 B

This designation is only required when ordering a: **B** — Beverage Duty, **F** — Food Duty

TriAdapt® Motor Adapter Size: **MT10**, **MT20**, **MT30**, **MT40**, **MT50**

Nominal Ratio: (**0580** = 57.5:1)

HOUSING STYLE
"**F**" Housing Style — Flange Mounting ..... **SPECIFY IN A NOTE**: Flange on Side 3 or Side 4
"**G**" Housing Style — Tapped Holes
"**GD**" G Housing Style with Torque Arm Bracket .... **SPECIFY IN A NOTE**: Torque Arm Bracket on Side 1 or Side 5
"**N**" Housing Style — Foot Mount ..... **SPECIFY IN A NOTE**: Feet on Side 1 or Side 5

OUTPUT STYLE
"**V**" Solid Output ..... **SPECIFY IN A NOTE**: Standard or Stainless Steel[1)], Imperial or Metric[1)], Single or Double, IF Single: Shaft on Side 3 or Side 4
"**A**" Hollow Output ..... **SPECIFY IN A NOTE**: Standard or Stainless Steel[1)], Imperial or Metric[1)]
"**W**" Wobble Free Bushing ..... **SPECIFY IN A NOTE**: Bushing Part Number, Single or Double Bushing, IF Single: Side 3 or Side 4

[1)] Not available in all sizes.

No. of Stages (**3** = 3 Stage, determined by ratio)

Design Generation

Unit Size No.

Right Angle Helical/Bevel

THE FOLLOWING INFORMATION IS REQUIRED FOR ANY UNIT:

Mounting Position — EL1 EL2 EL3 EL4 EL5 EL6 (See also Page 171.)
Motor — Motor Manufacturer and Model Number
Paint — Black (Standard) ..... White ..... Stainless
Package Option — Beverge Duty ..... Food Duty
Backlash Option — Standard or Reduced Backlash

Bushing Part No. Explanation

W F 5 – 107

Output Bore in inches — **107** = $1^{7}/_{16}$
Base Module Size example: K**5**13/K**5**14)
Wobble **F**ree Single Side Bushing

W F B 5 – 107

Output Bore in inches — **107** = $1^{7}/_{16}$
Base Module Size example: K**5**13/K**5**14)
Wobble **F**ree Double Side

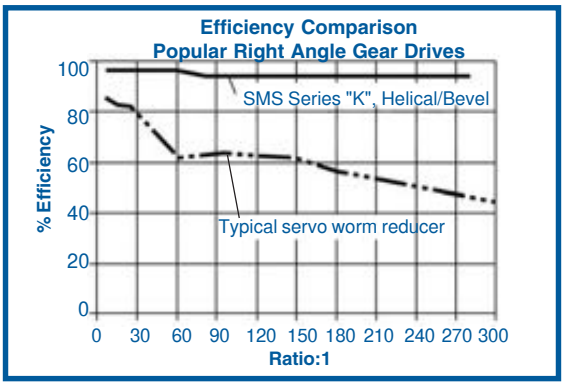
See web site for drawings.

"K" Series—Right Angle Helical/Bevel ServoFit® Modular System

Right angle helical/bevel gear drives offer higher input-to-output efficiencies than conventional worm gear drives or right angle planetary gearheads—making them the optimal drive for truly demanding continuous applications.

Performance Specifications:

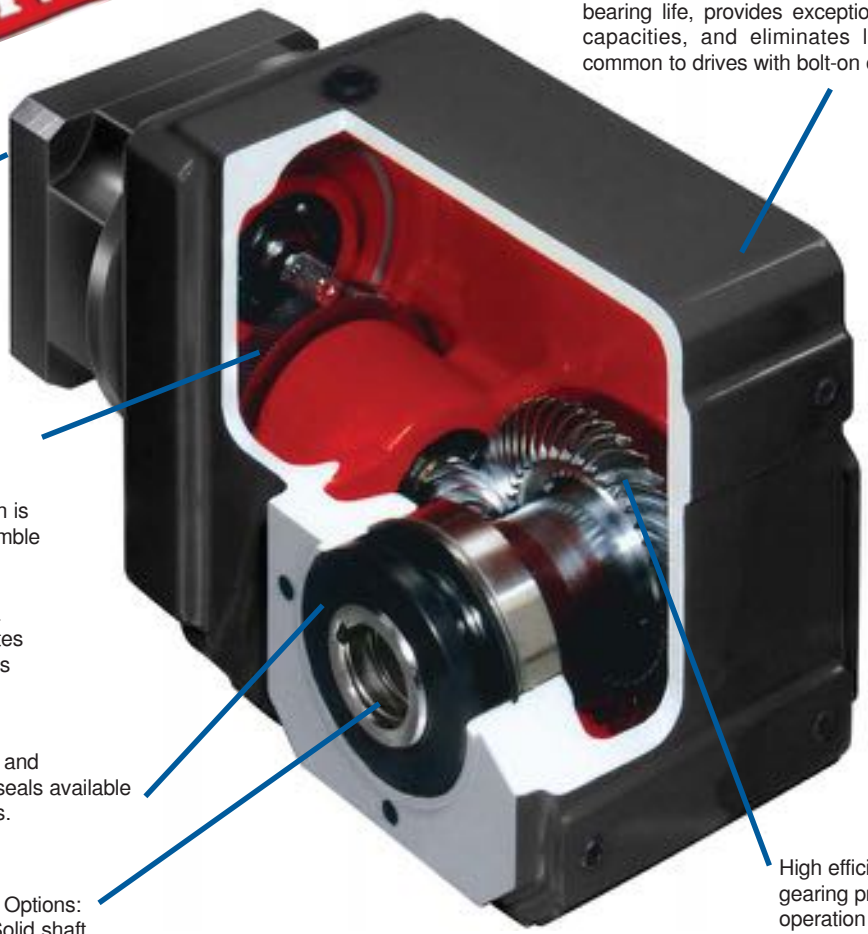
- Input RPM up to 4,500 RPM
- Nominal output torque—109 to 106,000 in. lbs. (12-11,900Nm)
- Reducer ratios from 4:1 to 381:1
- 5 year limited warranty (2 years on bearings, seals, etc.)
- Ambient temperature — 0°C to +40°C (104°F)
- Noise level — as low as 53 dB(A)
- Maintenance free
- Can be back driven





One-piece cast iron housing with precision machined bearing supports assure gearset alignment, prolongs bearing life, provides exceptional overhung load capacities, and eliminates leakage problems common to drives with bolt-on output covers.

Motor plate can easily be changed to fit your choice of motors.



High quality helical gearing is case hardened to 58-62 Rockwell C. Precision finished for low noise and long service life. When the backlash is set by our manufacturing and assemble methods it remains consistent throughout the life of the reducer without further need for adjustment. Standard backlash is ≤12 arc minutes Reduced backlash is ≤6 arc minutes

Double lip seals keep oil in and contaminants out. Double seals available for severe duty applications.

Output Options:
- Solid shaft
- Hollow
- Backlash free, wobble free bushings

Also available in metric or stainless shaft or quill

High efficiency spiral bevel gearing provides quiet operation and excellent torque carrying capacity

Shipped with the proper amount of oil to prevent gear damaging dry start-ups.

Also available in washdown, poultry duty, food duty, and beverage duty. Maximum 10 working days for custom motor plates.

See web site for drawings.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K102 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 53 dB(A)** [4]	
K102_0040 MT10	4.000	4/1	3,300	2,800	4,500	12/6	1.4	25	2.8	368	42	368	42	460	52
K102_0040 MT20	4.000	4/1	3,300	2,800	4,500	12/6	2.0	25	2.9	512	58	693	78	866	98
K102_0056 MT10	5.568	1520/273	3,300	2,800	4,500	12/6	1.3	38	4.3	512	58	512	58	640	72
K102_0056 MT20	5.568	1520/273	3,300	2,800	4,500	12/6	1.9	39	4.5	572	65	965	109	1,206	136
K102_0060 MT10	6.000	6/1	3,300	2,800	4,500	12/6	1.1	30	3.4	523	59	523	59	654	74
K102_0060 MT20	6.000	6/1	3,300	2,800	4,500	12/6	1.7	30	3.4	587	66	985	111	1,231	139
K102_0066 MT10	6.644	299/45	3,600	3,300	5,000	12/6	1.0	31	3.5	570	64	570	64	712	80
K102_0066 MT20	6.644	299/45	3,500	3,300	5,000	12/6	1.6	31	3.5	607	69	1,025	116	1,340	151
K102_0083 MT10	8.309	1911/230	3,600	3,300	5,000	12/6	0.9	33	3.7	654	74	684	77	855	97
K102_0083 MT20	8.309	1911/230	3,500	3,300	5,000	12/6	1.5	33	3.7	654	74	1,104	125	1,611	182
K102_0092 MT10	9.249	1748/189	3,600	3,300	5,000	12/6	0.9	46	5.2	678	76	793	90	991	112
K102_0092 MT20	9.249	1748/189	3,500	3,300	5,000	12/6	1.5	46	5.2	678	76	1,145	129	1,866	211
K102_0100 MT10	10.14	507/50	4,000	3,800	5,500	12/6	0.8	34	3.8	699	79	806	91	1,008	114
K102_0100 MT20	10.14	507/50	3,500	3,500	5,000	12/6	1.4	34	3.8	699	79	1,107	125	1,898	214
K102_0115 MT10	11.57	266/23	3,600	3,300	5,000	12/6	0.8	48	5.4	730	82	952	108	1,190	134
K102_0115 MT20	11.57	266/23	3,500	3,300	5,000	12/6	1.4	48	5.4	730	82	1,196	135	2,126	240
K102_0125 MT10	12.62	429/34	4,000	3,800	5,500	12/6	0.7	34	3.9	751	85	963	109	1,204	136
K102_0125 MT20	12.62	429/34	3,500	3,500	5,000	12/6	1.3	35	3.9	751	85	1,107	125	1,949	220
K102_0140 MT10	14.11	494/35	4,000	3,800	5,500	12/6	0.8	49	5.5	780	88	1,122	127	1,403	158
K102_0140 MT20	14.11	494/35	3,500	3,500	5,000	12/6	1.4	49	5.6	780	88	1,196	135	2,126	240
K102_0165 MT10	16.71	117/7	4,000	4,000	6,000	12/6	0.7	35	4.0	825	93	1,107	125	1,520	172
K102_0165 MT20	16.71	117/7	3,500	3,500	5,000	12/6	1.3	35	4.0	825	93	1,107	125	1,520	172
K102_0175 MT10	17.56	2090/119	4,000	3,800	5,500	12/6	0.7	50	5.6	839	95	1,196	135	1,676	189
K102_0175 MT20	17.56	2090/119	3,500	3,500	5,000	12/6	1.3	50	5.6	839	95	1,196	135	2,126	240
K102_0200 MT10	20.15	403/20	4,000	4,000	6,000	12/6	0.7	35	4.0	878	99	1,107	125	1,763	199
K102_0200 MT20	20.15	403/20	3,500	3,500	5,000	12/6	1.3	35	4.0	878	99	1,107	125	1,763	199
K102_0230 MT10	23.27	1140/49	4,000	4,000	6,000	12/6	0.7	51	5.7	921	104	1,196	135	2,115	239
K102_0230 MT20	23.27	1140/49	3,500	3,500	5,000	12/6	1.3	51	5.7	921	104	1,196	135	2,115	239
K102_0250 MT10	25.22	1261/50	4,000	4,000	6,000	12/6	0.6	36	4.0	851	96	1,021	115	1,701	192
K102_0250 MT20	25.22	1261/50	3,500	3,500	5,000	12/6	1.2	36	4.0	851	96	1,021	115	1,701	192
K102_0280 MT10	28.05	589/21	4,000	4,000	6,000	12/6	0.7	51	5.7	981	111	1,196	135	2,126	240
K102_0280 MT20	28.05	589/21	3,500	3,500	5,000	12/6	1.3	51	5.8	981	111	1,196	135	2,126	240
K102_0340 MT10	33.71	4719/140	4,000	4,000	6,000	12/6	0.6	36	4.0	647	73	776	88	1,293	146
K102_0350 MT10	35.11	3686/105	4,000	4,000	6,000	12/6	0.6	51	5.8	1,057	119	1,196	135	2,126	240
K102_0350 MT20	35.11	3686/105	3,500	3,500	5,000	12/6	1.2	51	5.8	1,057	119	1,196	135	2,126	240
K102_0400 MT10	40.30	403/10	4,000	4,000	6,000	12/6	0.6	36	4.1	544	61	653	74	846	96
K102_0470 MT10	46.92	2299/49	4,000	4,000	6,000	12/6	0.6	51	5.8	900	102	1,080	122	1,800	203
K102_0500 MT10	50.31	5031/100	4,000	4,000	6,000	12/6	0.6	36	4.1	442	50	531	60	885	100
K102_0560 MT10	56.10	1178/21	4,000	4,000	6,000	12/6	0.6	51	5.8	758	86	909	103	1,178	133
K102_0700 MT10	70.03	2451/35	4,000	4,000	6,000	12/6	0.6	51	5.8	616	70	739	83	1,232	139

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



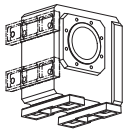
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K202 with MT TriAdapt® Motor Adapter Continued Next Page													**Noise Level ≤ 53 dB(A)** [4]		
K202_0040 MT10	4.000	4/1	3,000	2,600	4,000	10/5	3.1	33	3.8	393	44	393	44	491	55
K202_0040 MT20	4.000	4/1	3,000	2,600	4,000	10/5	3.7	35	3.9	915	103	1,512	171	2,170	245
K202_0040 MT30	4.000	4/1	3,000	2,600	4,000	10/5	8.5	41	4.7	915	103	1,546	174	2,170	245
K202_0044 MT10	4.364	48/11	3,000	2,600	4,000	10/5	2.7	36	4.1	421	48	421	48	526	59
K202_0044 MT20	4.364	48/11	3,000	2,600	4,000	10/5	3.3	37	4.2	942	106	1,591	180	2,327	263
K202_0044 MT30	4.364	48/11	3,000	2,600	4,000	10/5	8.1	43	4.9	942	106	1,591	180	2,327	263
K202_0052 MT20	5.177	2107/407	3,000	2,600	4,000	10/5	2.9	42	4.7	997	113	1,684	190	2,724	308
K202_0052 MT30	5.177	2107/407	3,000	2,600	4,000	10/5	7.7	47	5.3	997	113	1,684	190	2,724	308
K202_0060 MT10	6.000	6/1	3,000	2,600	4,000	10/5	2.3	51	5.8	579	65	579	65	724	82
K202_0060 MT20	6.000	6/1	3,000	2,600	4,000	10/5	2.9	53	5.9	1,047	118	1,769	200	3,199	361
K202_0060 MT30	6.000	6/1	3,000	2,600	4,000	10/5	7.7	59	6.6	1,047	118	1,769	200	3,199	361
K202_0067 MT10	6.683	2279/341	3,500	3,100	4,500	10/5	1.7	46	5.2	609	69	609	69	761	86
K202_0067 MT20	6.683	2279/341	3,500	3,100	4,500	10/5	2.3	47	5.3	1,086	123	1,834	207	3,364	380
K202_0067 MT30	6.683	2279/341	3,500	3,100	4,000	10/5	7.1	51	5.8	1,086	123	1,834	207	3,364	380
K202_0071 MT20	7.118	2107/296	3,000	2,600	4,000	10/5	2.6	57	6.4	1,109	125	1,873	211	3,543	400
K202_0071 MT30	7.118	2107/296	3,000	2,600	4,000	10/5	7.4	62	7.0	1,109	125	1,873	211	3,543	400
K202_0084 MT10	8.397	2494/297	3,500	3,100	4,500	10/5	1.4	50	5.7	739	83	739	83	924	104
K202_0084 MT20	8.397	2494/297	3,500	3,100	4,500	10/5	2.0	51	5.7	1,171	132	1,949	220	3,543	400
K202_0084 MT30	8.397	2494/297	3,500	3,100	4,000	10/5	6.8	54	6.1	1,171	132	1,949	220	3,543	400
K202_0092 MT10	9.190	2279/248	3,500	3,100	4,500	10/5	1.5	61	6.9	837	95	837	95	1,046	118
K202_0092 MT20	9.190	2279/248	3,500	3,100	4,500	10/5	2.1	62	7.0	1,207	136	1,949	220	3,543	400
K202_0092 MT30	9.190	2279/248	3,500	3,100	4,000	10/5	6.9	66	7.4	1,207	136	1,949	220	3,543	400
K202_0100 MT10	10.07	2881/286	3,900	3,500	5,000	10/5	1.2	52	5.9	855	97	855	97	1,069	121
K202_0100 MT20	10.07	2881/286	3,500	3,500	5,000	10/5	1.8	53	6.0	1,245	141	1,949	220	3,543	400
K202_0100 MT30	10.07	2881/286	3,500	3,500	4,000	10/5	6.6	55	6.2	1,245	141	1,949	220	3,543	400
K202_0115 MT10	11.55	1247/108	3,500	3,100	4,500	10/5	1.3	65	7.3	1,016	115	1,016	115	1,270	143
K202_0115 MT20	11.55	1247/108	3,500	3,100	4,500	10/5	1.9	66	7.4	1,303	147	1,949	220	3,543	400
K202_0115 MT30	11.55	1247/108	3,500	3,100	4,000	10/5	6.7	68	7.7	1,303	147	1,949	220	3,543	400
K202_0125 MT10	12.71	559/44	3,900	3,500	5,000	10/5	1.0	55	6.2	1,037	117	1,037	117	1,297	146
K202_0125 MT20	12.71	559/44	3,500	3,500	5,000	10/5	1.6	55	6.2	1,345	152	1,949	220	3,543	400
K202_0125 MT30	12.71	559/44	3,500	3,500	4,000	10/5	6.4	56	6.4	1,345	152	1,949	220	3,543	400
K202_0140 MT10	13.85	2881/208	3,900	3,500	5,000	10/5	1.1	67	7.6	1,176	133	1,176	133	1,470	166
K202_0140 MT20	13.85	2881/208	3,500	3,500	5,000	10/5	1.7	67	7.6	1,384	156	1,949	220	3,543	400
K202_0140 MT30	13.85	2881/208	3,500	3,500	4,000	10/5	6.5	69	7.8	1,384	156	1,949	220	3,543	400
K202_0170 MT10	16.86	2967/176	4,000	3,900	5,500	10/5	0.9	56	6.4	1,302	147	1,302	147	1,627	184
K202_0170 MT20	16.86	2967/176	3,500	3,500	5,000	10/5	1.5	57	6.4	1,478	167	1,949	220	3,543	400
K202_0170 MT30	16.86	2967/176	3,500	3,500	4,000	10/5	6.3	57	6.5	1,478	167	1,949	220	3,543	400
K202_0175 MT10	17.47	559/32	3,900	3,500	5,000	10/5	1.0	69	7.8	1,426	161	1,426	161	1,783	201
K202_0175 MT20	17.47	559/32	3,500	3,500	5,000	10/5	1.6	69	7.8	1,495	169	1,949	220	3,543	400
K202_0175 MT30	17.47	559/32	3,500	3,500	4,000	10/5	6.4	70	7.9	1,495	169	1,949	220	3,543	400
K202_0200 MT10	20.33	1118/55	4,000	3,900	5,500	10/5	0.8	57	6.4	1,504	170	1,504	170	1,880	212
K202_0200 MT20	20.33	1118/55	3,500	3,500	5,000	10/5	1.4	57	6.5	1,573	178	1,949	220	3,541	400
K202_0200 MT30	20.33	1118/55	3,500	3,500	4,000	10/5	6.2	58	6.5	1,573	178	1,949	220	3,541	400

Motor Shaft

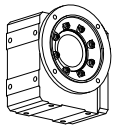
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

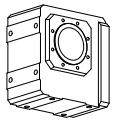
N Foot Mounted



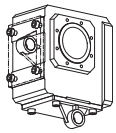
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K202 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 53 dB(A)** [4]	
K202_0230 MT10	23.18	2967/128	4,000	3,900	5,500	10/5	0.8	70	7.9	1,643	186	1,790	202	2,237	253
K202_0230 MT20	23.18	2967/128	3,500	3,500	5,000	10/5	1.4	70	7.9	1,643	186	1,949	220	3,543	400
K202_0230 MT30	23.18	2967/128	3,500	3,500	4,000	10/5	6.2	71	8.0	1,643	186	1,949	220	3,543	400
K202_0250 MT10	25.13	1935/77	4,000	3,900	5,500	10/5	0.7	58	6.5	1,688	191	1,775	200	2,219	250
K202_0250 MT20	25.13	1935/77	3,500	3,500	5,000	10/5	1.3	58	6.5	1,688	191	1,949	220	3,543	400
K202_0250 MT30	25.13	1935/77	3,500	3,500	4,000	10/5	6.1	58	6.6	1,688	191	1,949	220	3,543	400
K202_0280 MT10	27.95	559/20	4,000	3,900	5,500	10/5	0.8	71	8.0	1,749	197	1,949	220	2,586	292
K202_0280 MT20	27.95	559/20	3,500	3,500	5,000	10/5	1.4	71	8.0	1,749	197	1,949	220	3,543	400
K202_0280 MT30	27.95	559/20	3,500	3,500	4,000	10/5	6.2	71	8.1	1,749	197	1,949	220	3,543	400
K202_0340 MT10	33.62	1849/55	4,000	3,900	5,500	10/5	0.7	58	6.6	1,364	154	1,637	185	2,729	308
K202_0340 MT20	33.62	1849/55	3,500	3,500	5,000	10/5	1.3	58	6.6	1,364	154	1,637	185	2,729	308
K202_0350 MT10	34.55	1935/56	4,000	3,900	5,500	10/5	0.7	71	8.0	1,772	200	1,949	220	3,051	344
K202_0350 MT20	34.55	1935/56	3,500	3,500	5,000	10/5	1.3	71	8.1	1,772	200	1,949	220	3,543	400
K202_0350 MT30	34.55	1935/56	3,500	3,500	4,000	10/5	6.1	72	8.1	1,772	200	1,949	220	3,543	400
K202_0400 MT10	40.39	1333/33	4,000	3,900	5,500	10/5	0.7	58	6.6	1,023	116	1,228	139	1,690	191
K202_0460 MT10	46.23	1849/40	4,000	3,900	5,500	10/5	0.7	72	8.1	1,772	200	1,949	220	3,543	400
K202_0460 MT20	46.23	1849/40	3,500	3,500	5,000	10/5	1.3	72	8.1	1,772	200	1,949	220	3,543	400
K202_0500 MT10	50.49	6665/132	4,000	3,900	5,500	10/5	0.6	58	6.6	853	96	1,023	116	1,705	193
K202_0560 MT10	55.54	1333/24	4,000	3,900	5,500	10/5	0.7	72	8.1	1,407	159	1,688	191	2,323	262
K202_0690 MT10	69.43	6665/96	4,000	3,900	5,500	10/5	0.6	72	8.1	1,172	132	1,407	159	2,345	265
K203 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 53 dB(A)** [4]	
K203_0390 MT10	39.45	135407/3432	4,000	3,900	5,500	10/6	0.7	58	6.6	1,431	162	1,431	162	1,788	202
K203_0450 MT10	45.22	58609/1296	4,000	3,900	5,500	10/6	0.7	72	8.1	1,640	185	1,640	185	2,050	231
K203_0500 MT10	49.76	26273/528	4,000	3,900	5,500	10/6	0.7	58	6.6	1,772	200	1,804	204	2,256	255
K203_0540 MT10	54.25	135407/2496	4,000	3,900	5,500	10/6	0.7	72	8.1	1,772	200	1,949	220	2,459	278
K203_0660 MT10	66.03	46483/704	4,000	3,900	5,500	10/6	0.7	59	6.6	1,772	200	1,949	220	2,993	338
K203_0680 MT10	68.42	26273/384	4,000	3,900	5,500	10/6	0.7	72	8.1	1,772	200	1,949	220	3,101	350
K203_0800 MT10	79.62	26273/330	4,000	3,900	5,500	10/6	0.7	59	6.6	1,772	200	1,949	220	3,540	400
K203_0910 MT10	90.79	46483/512	4,000	3,900	5,500	10/6	0.7	72	8.1	1,772	200	1,949	220	3,543	400
K203_1090 MT10	109.5	26273/240	4,000	3,900	5,500	10/6	0.7	72	8.1	1,772	200	1,949	220	3,543	400
K203_1350 MT10	135.3	30315/224	4,000	3,900	5,500	10/6	0.7	72	8.1	1,772	200	1,949	220	3,543	400
K203_1810 MT10	181.0	86903/480	4,000	3,900	5,500	10/6	0.7	72	8.1	1,772	200	1,949	220	3,543	400
K203_2180 MT10	217.5	62651/288	4,000	3,900	5,500	10/6	0.6	72	8.1	1,407	159	1,688	191	2,323	262
K203_2720 MT10	271.9	313255/1152	4,000	3,900	5,500	10/6	0.6	72	8.1	1,172	132	1,407	159	2,345	265

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



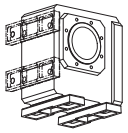
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K302 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 53 dB(A)** [4]	
K302_0040 MT20	4.000	4/1	2,700	2,300	3,800	10/4	6.4	40	4.5	1,375	155	1,512	171	2,238	253
K302_0040 MT30	4.000	4/1	2,700	2,300	3,800	10/4	11.2	49	5.5	1,602	181	2,707	306	5,772	652
K302_0044 MT20	4.364	48/11	2,700	2,300	3,800	10/4	5.7	43	4.9	1,500	169	1,650	186	2,421	273
K302_0044 MT30	4.364	48/11	2,700	2,300	3,800	10/4	10.5	52	5.8	1,650	186	2,787	315	6,201	700
K302_0054 MT20	5.375	43/8	2,700	2,300	3,800	10/4	4.5	51	5.7	1,768	200	2,032	229	2,884	326
K302_0054 MT30	5.375	43/8	2,700	2,300	3,800	10/4	9.3	58	6.5	1,768	200	2,307	260	2,884	326
K302_0060 MT20	6.000	6/1	2,700	2,300	3,800	10/4	4.8	59	6.7	1,834	207	2,268	256	3,328	376
K302_0060 MT30	6.000	6/1	2,700	2,300	3,800	10/4	9.6	67	7.6	1,834	207	3,099	350	6,201	700
K302_0067 MT20	6.740	2150/319	3,200	2,800	4,200	10/4	3.5	57	6.5	1,907	215	2,548	288	3,515	397
K302_0067 MT30	6.740	2150/319	3,200	2,800	4,000	10/4	8.3	63	7.1	1,907	215	2,812	317	3,515	397
K302_0074 MT20	7.391	473/64	2,700	2,300	3,800	10/4	3.9	66	7.5	1,966	222	2,794	315	3,965	448
K302_0074 MT30	7.391	473/64	2,700	2,300	3,800	10/4	8.7	73	8.2	1,966	222	3,172	358	3,965	448
K302_0084 MT20	8.444	2322/275	3,200	2,800	4,200	10/4	2.8	63	7.1	2,056	232	3,192	360	4,244	479
K302_0084 MT30	8.444	2322/275	3,200	2,800	4,000	10/4	7.6	67	7.5	2,056	232	3,395	383	4,244	479
K302_0093 MT20	9.267	1075/116	3,200	2,800	4,200	10/4	3.2	72	8.2	2,120	239	3,410	385	4,833	546
K302_0093 MT30	9.267	1075/116	3,200	2,800	4,000	10/4	8.0	77	8.7	2,120	239	3,410	385	4,833	546
K302_0100 MT20	10.14	3010/297	3,500	3,100	5,000	10/4	2.4	66	7.4	2,185	247	3,410	385	4,911	554
K302_0100 MT30	10.14	3010/297	3,500	3,100	4,000	10/4	7.2	69	7.8	2,185	247	3,410	385	4,911	554
K302_0115 MT20	11.61	1161/100	3,200	2,800	4,200	10/4	2.6	77	8.6	2,286	258	3,410	385	5,835	659
K302_0115 MT30	11.61	1161/100	3,200	2,800	4,000	10/4	7.4	80	9.0	2,286	258	3,410	385	5,835	659
K302_0125 MT10	12.58	3182/253	3,500	3,100	5,000	10/4	1.5	68	7.7	1,059	120	1,059	120	1,324	150
K302_0125 MT20	12.58	3182/253	3,500	3,100	5,000	10/4	2.1	69	7.8	2,348	265	3,410	385	5,854	661
K302_0125 MT30	12.58	3182/253	3,500	3,100	4,000	10/4	6.9	71	8.0	2,348	265	3,410	385	5,854	661
K302_0140 MT20	13.94	1505/108	3,500	3,100	5,000	10/4	2.3	79	8.9	2,429	274	3,410	385	6,201	700
K302_0140 MT30	13.94	1505/108	3,500	3,100	4,000	10/4	7.1	81	9.2	2,429	274	3,410	385	6,201	700
K302_0170 MT10	16.94	559/33	3,800	3,500	5,000	10/4	1.1	71	8.0	1,342	152	1,342	152	1,678	189
K302_0170 MT20	16.94	559/33	3,500	3,500	5,000	10/4	1.7	71	8.1	2,592	293	3,410	385	6,201	700
K302_0170 MT30	16.94	559/33	3,500	3,500	4,000	10/4	6.5	73	8.2	2,592	293	3,410	385	6,201	700
K302_0175 MT10	17.29	1591/92	3,500	3,100	5,000	10/4	1.4	81	9.1	1,457	164	1,457	164	1,821	206
K302_0175 MT20	17.29	1591/92	3,500	3,100	5,000	10/4	2.0	81	9.2	2,610	295	3,410	385	6,201	700
K302_0175 MT30	17.29	1591/92	3,500	3,100	4,000	10/4	6.8	83	9.4	2,610	295	3,410	385	6,201	700
K302_0200 MT10	20.28	3569/176	3,800	3,500	5,000	10/4	1.0	72	8.1	1,555	176	1,555	176	1,943	219
K302_0200 MT20	20.28	3569/176	3,500	3,500	5,000	10/4	1.6	72	8.2	2,753	311	3,410	385	6,201	700
K302_0200 MT30	20.28	3569/176	3,500	3,500	4,000	10/4	6.4	73	8.3	2,753	311	3,410	385	6,201	700
K302_0230 MT10	23.29	559/24	3,800	3,500	5,000	10/4	1.1	83	9.4	1,845	208	1,845	208	2,307	260
K302_0230 MT20	23.29	559/24	3,500	3,500	5,000	10/4	1.7	83	9.4	2,883	325	3,410	385	6,201	700
K302_0230 MT30	23.29	559/24	3,500	3,500	4,000	10/4	6.5	84	9.5	2,883	325	3,410	385	6,201	700
K302_0250 MT10	25.26	3612/143	3,800	3,500	5,000	10/4	0.9	73	8.2	1,839	208	1,839	208	2,298	259
K302_0250 MT20	25.26	3612/143	3,500	3,500	5,000	10/4	1.5	73	8.3	2,962	334	3,410	385	4,328	489
K302_0250 MT30	25.26	3612/143	3,500	3,500	4,000	10/4	6.3	74	8.3	2,962	334	3,410	385	4,328	489
K302_0280 MT10	27.88	3569/128	3,800	3,500	5,000	10/4	1.0	84	9.4	2,138	241	2,138	241	2,672	302
K302_0280 MT20	27.88	3569/128	3,500	3,500	5,000	10/4	1.6	84	9.5	3,061	346	3,410	385	6,201	700
K302_0280 MT30	27.88	3569/128	3,500	3,500	4,000	10/4	6.4	85	9.5	3,061	346	3,410	385	6,201	700

Motor Shaft

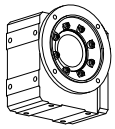
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

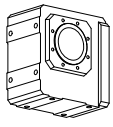
N Foot Mounted



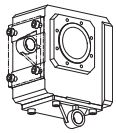
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	$T_{2N \le 2000\ RPM}$ in.lbs.	$T_{2N \le 2000\ RPM}$ Nm	T_{2B} in.lbs.	T_{2B} Nm	T_{2PEAK} in.lbs.	T_{2PEAK} Nm
K302 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 53 dB(A)** [4]	
K302_0340 MT10	33.62	1849/55	3,800	3,500	5,000	10/4	0.8	74	8.3	2,217	250	2,299	260	2,874	324
K302_0340 MT20	33.62	1849/55	3,500	3,500	5,000	10/4	1.4	74	8.3	2,217	250	2,660	300	4,434	501
K302_0340 MT30	33.62	1849/55	3,500	3,500	4,000	10/4	6.2	74	8.4	2,217	250	2,660	300	4,434	501
K302_0350 MT10	34.73	903/26	3,800	3,500	5,000	10/4	0.9	84	9.5	2,528	285	2,528	285	3,160	357
K302_0350 MT20	34.73	903/26	3,500	3,500	5,000	10/4	1.5	84	9.5	3,100	350	3,410	385	5,951	672
K302_0350 MT30	34.73	903/26	3,500	3,500	4,000	10/4	6.3	85	9.6	3,100	350	3,410	385	5,951	672
K302_0410 MT10	40.51	4902/121	3,800	3,500	5,000	10/4	0.7	74	8.4	1,705	193	2,046	231	3,334	376
K302_0410 MT20	40.51	4902/121	3,500	3,500	5,000	10/4	1.3	74	8.4	1,705	193	2,046	231	3,334	376
K302_0460 MT10	46.23	1849/40	3,800	3,500	5,000	10/4	0.8	85	9.6	3,048	344	3,162	357	3,952	446
K302_0460 MT20	46.23	1849/40	3,500	3,500	5,000	10/4	1.4	85	9.6	3,048	344	3,410	385	6,097	688
K302_0460 MT30	46.23	1849/40	3,500	3,500	4,000	10/4	6.2	85	9.6	3,048	344	3,410	385	6,097	688
K302_0500 MT10	50.49	6665/132	3,800	3,500	5,000	10/4	0.7	74	8.4	1,364	154	1,637	185	2,072	234
K302_0560 MT10	55.71	2451/44	3,800	3,500	5,000	10/4	0.7	85	9.6	2,345	265	2,814	318	4,584	517
K302_0560 MT20	55.71	2451/44	3,500	3,500	5,000	10/4	1.3	85	9.6	2,345	265	2,814	318	4,584	517
K302_0690 MT10	69.43	6665/96	3,800	3,500	5,000	10/4	0.7	85	9.6	1,876	212	2,251	254	2,849	322
K303 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 53 dB(A)** [4]	
K303_0330 MT20	32.65	44892/1375	3,500	3,500	5,000	10/5	1.5	74	8.3	3,100	350	3,394	383	4,243	479
K303_0360 MT20	35.83	215/6	3,500	3,500	5,000	10/5	1.5	85	9.5	3,100	350	3,410	385	4,833	546
K303_0390 MT20	39.19	34916/891	3,500	3,500	5,000	10/5	1.4	74	8.4	3,100	350	3,410	385	4,910	554
K303_0450 MT20	44.89	11223/250	3,500	3,500	5,000	10/5	1.4	85	9.6	3,100	350	3,410	385	5,834	659
K303_0490 MT10	49.26	74777/1518	3,800	3,500	5,000	10/5	0.7	74	8.4	1,786	202	1,786	202	2,233	252
K303_0490 MT20	48.63	184556/3795	3,500	3,500	5,000	10/5	1.4	74	8.4	3,100	350	3,410	385	5,854	661
K303_0540 MT20	53.88	8729/162	3,500	3,500	5,000	10/5	1.4	85	9.6	3,100	350	3,410	385	6,201	700
K303_0550 MT10	54.58	70735/1296	3,800	3,500	5,000	10/5	0.7	85	9.6	1,979	223	1,979	223	2,474	279
K303_0650 MT20	65.50	32422/495	3,500	3,500	5,000	10/5	1.4	75	8.4	3,100	350	3,410	385	6,201	700
K303_0660 MT10	66.35	26273/396	3,800	3,500	5,000	10/5/2,5	0.7	75	8.4	2,406	272	2,406	272	3,007	340
K303_0670 MT20	66.87	46139/690	3,500	3,500	5,000	10/5	1.4	85	9.6	3,100	350	3,410	385	6,201	700
K303_0680 MT10	67.73	74777/1104	3,800	3,500	5,000	10/5	0.7	85	9.6	2,456	277	2,456	277	3,070	347
K303_0780 MT20	78.41	103501/1320	3,500	3,500	5,000	10/5	1.4	75	8.4	3,100	350	3,410	385	6,201	700
K303_0790 MT10	79.42	167743/2112	3,800	3,500	5,000	10/5	0.7	75	8.4	2,832	320	2,880	325	3,600	406
K303_0900 MT20	90.06	16211/180	3,500	3,500	5,000	10/5	1.4	85	9.6	3,100	350	3,410	385	6,201	700
K303_0910 MT10	91.23	26273/288	3,800	3,500	5,000	10/5	0.7	85	9.6	3,100	350	3,308	373	4,135	467
K303_1080 MT20	107.8	103501/960	3,500	3,500	5,000	10/5	1.4	85	9.6	3,100	350	3,410	385	6,201	700
K303_1090 MT10	109.2	167743/1536	3,800	3,500	5,000	10/5	0.7	85	9.6	3,100	350	3,410	385	4,950	559
K303_1340 MT20	134.3	8729/65	3,500	3,500	5,000	10/5	1.4	85	9.7	3,100	350	3,410	385	5,950	672
K303_1360 MT10	136.0	14147/104	3,800	3,500	5,000	10/5	0.7	85	9.7	3,100	350	3,410	385	5,950	672
K303_1790 MT20	178.7	53621/300	3,500	3,500	5,000	10/5	1.4	86	9.7	3,048	344	3,410	385	6,097	688
K303_1810 MT10	181.0	86903/480	3,800	3,500	5,000	10/5	0.7	86	9.7	3,048	344	3,410	385	6,097	688
K303_2180 MT10	218.2	38399/176	3,800	3,500	5,000	10/5	0.7	86	9.7	2,345	265	2,814	318	4,583	517
K303_2720 MT10	271.9	313255/1152	3,800	3,500	5,000	10/5	0.7	86	9.7	1,876	212	2,251	254	2,849	322

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



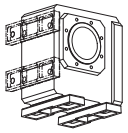
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K402 with MT TriAdapt® Motor Adapter Continued Next Page											**Noise Level ≤ 51 dB(A)** [4]				
K402_0040 MT20	4.000	4/1	2,600	2,200	3,500	10/4	11.4	55	6.2	1,375	155	1,512	171	2,311	261
K402_0040 MT30	4.000	4/1	2,600	2,200	3,500	10/4	16.2	72	8.2	2,405	271	3,592	405	5,960	673
K402_0040 MT40	4.000	4/1	2,600	2,200	3,500	10/4	20.2	99	11.2	2,405	271	4,062	459	5,960	673
K402_0044 MT20	4.364	48/11	2,600	2,200	3,500	10/4	10.1	61	6.9	1,500	169	1,650	186	2,503	283
K402_0044 MT30	4.364	48/11	2,600	2,200	3,500	10/4	14.9	79	8.9	2,475	279	3,918	442	6,456	729
K402_0044 MT40	4.364	48/11	2,600	2,200	3,500	10/4	18.9	105	11.8	2,475	279	4,182	472	6,456	729
K402_0054 MT20	5.422	1849/341	2,600	2,200	3,500	10/4	7.5	77	8.7	1,863	210	2,050	231	3,021	341
K402_0054 MT30	5.422	1849/341	2,600	2,200	3,500	10/4	12.3	95	10.7	2,661	300	4,496	508	7,791	880
K402_0054 MT40	5.422	1849/341	2,600	2,200	3,500	10/4	16.3	117	13.2	2,661	300	4,496	508	7,791	880
K402_0060 MT20	6.000	6/1	2,600	2,200	3,500	10/4	8.4	92	10.4	2,062	233	2,268	256	3,442	389
K402_0060 MT30	6.000	6/1	2,600	2,200	3,500	10/4	13.2	113	12.8	2,752	311	4,650	525	8,877	1,002
K402_0060 MT40	6.000	6/1	2,600	2,200	3,500	10/4	17.2	139	15.7	2,752	311	4,650	525	8,877	1,002
K402_0067 MT20	6.719	215/32	3,000	2,600	4,000	10/4	5.6	93	10.5	2,309	261	2,540	287	3,605	407
K402_0067 MT30	6.719	215/32	3,000	2,600	4,000	10/4	10.4	108	12.2	2,858	323	4,829	545	9,298	1,050
K402_0067 MT40	6.719	215/32	3,000	2,600	3,500	10/4	14.4	127	14.3	2,858	323	4,829	545	9,298	1,050
K402_0075 MT20	7.456	1849/248	2,600	2,200	3,500	10/4	6.4	111	12.5	2,563	289	2,819	318	4,154	469
K402_0075 MT30	7.456	1849/248	2,600	2,200	3,500	10/4	11.2	129	14.6	2,959	334	4,999	564	9,744	1,100
K402_0075 MT40	7.456	1849/248	2,600	2,200	3,500	10/4	15.2	150	17.0	2,959	334	4,999	564	9,744	1,100
K402_0084 MT20	8.377	645/77	3,000	2,600	4,000	10/4	4.3	107	12.1	2,879	325	3,167	358	4,347	491
K402_0084 MT30	8.377	645/77	3,000	2,600	4,000	10/4	9.1	120	13.6	3,076	347	5,197	587	9,744	1,100
K402_0084 MT40	8.377	645/77	3,000	2,600	3,500	10/4	13.1	134	15.1	3,076	347	5,197	587	9,744	1,100
K402_0092 MT20	9.238	2365/256	3,000	2,600	4,000	10/4	4.9	128	14.4	3,175	358	3,493	394	4,956	560
K402_0092 MT30	9.238	2365/256	3,000	2,600	4,000	10/4	9.7	143	16.1	3,178	359	5,315	600	9,744	1,100
K402_0092 MT40	9.238	2365/256	3,000	2,600	3,500	10/4	13.7	159	17.9	3,178	359	5,315	600	9,744	1,100
K402_0100 MT20	10.10	1333/132	3,400	3,000	4,500	10/4	3.5	118	13.3	3,274	370	3,818	431	5,042	569
K402_0100 MT30	10.10	1333/132	3,400	3,000	4,000	10/4	8.3	128	14.5	3,274	370	5,315	600	9,744	1,100
K402_0100 MT40	10.10	1333/132	3,000	3,000	3,500	10/4	12.3	138	15.6	3,274	370	5,315	600	9,744	1,100
K402_0115 MT20	11.52	645/56	3,000	2,600	4,000	10/4	3.9	141	16.0	3,421	386	4,354	492	5,977	675
K402_0115 MT30	11.52	645/56	3,000	2,600	4,000	10/4	8.7	153	17.3	3,421	386	5,315	600	9,744	1,100
K402_0115 MT40	11.52	645/56	3,000	2,600	3,500	10/4	12.7	164	18.6	3,421	386	5,315	600	9,744	1,100
K402_0125 MT20	12.66	2924/231	3,400	3,000	4,500	10/4	2.8	127	14.4	3,530	399	4,785	540	6,113	690
K402_0125 MT30	12.66	2924/231	3,400	3,000	4,000	10/4	7.6	135	15.2	3,530	399	5,315	600	9,744	1,100
K402_0125 MT40	12.66	2924/231	3,000	3,000	3,500	10/4	11.6	142	16.1	3,530	399	5,315	600	9,744	1,100
K402_0140 MT20	13.89	1333/96	3,400	3,000	4,500	10/4	3.2	151	17.0	3,641	411	5,249	593	6,933	783
K402_0140 MT30	13.89	1333/96	3,400	3,000	4,000	10/4	8.0	160	18.0	3,641	411	5,315	600	9,744	1,100
K402_0140 MT40	13.89	1333/96	3,000	3,000	3,500	10/4	12.0	168	19.0	3,641	411	5,315	600	9,744	1,100
K402_0170 MT20	16.94	559/33	3,500	3,300	5,000	10/4	2.2	136	15.4	3,827	432	5,315	600	7,682	867
K402_0170 MT30	16.94	559/33	3,500	3,300	4,000	10/4	7.0	141	15.9	3,890	439	5,315	600	9,744	1,100
K402_0170 MT40	16.94	559/33	3,000	3,000	3,500	10/4	11.0	145	16.4	3,890	439	5,315	600	9,744	1,100
K402_0175 MT20	17.41	731/42	3,400	3,000	4,500	10/4	2.6	159	18.0	3,926	443	5,315	600	8,405	949
K402_0175 MT30	17.41	731/42	3,400	3,000	4,000	10/4	7.4	165	18.7	3,926	443	5,315	600	9,744	1,100
K402_0175 MT40	17.41	731/42	3,000	3,000	3,500	10/4	11.4	171	19.3	3,926	443	5,315	600	9,744	1,100

Motor Shaft

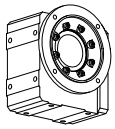
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

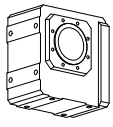
N Foot Mounted



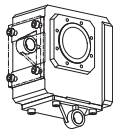
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	$T_{2N \le 2000\ RPM}$ in.lbs.	$T_{2N \le 2000\ RPM}$ Nm	T_{2B} in.lbs.	T_{2B} Nm	T_{2PEAK} in.lbs.	T_{2PEAK} Nm
K402 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 51 dB(A)** [4]	
K402_0200 MT20	20.20	1333/66	3,500	3,300	5,000	10/4	1.9	140	15.8	3,964	447	5,315	600	8,842	998
K402_0200 MT30	20.20	1333/66	3,500	3,300	4,000	10/4	6.7	143	16.2	4,125	466	5,315	600	8,842	998
K402_0200 MT40	20.20	1333/66	3,000	3,000	3,500	10/4	10.7	147	16.5	4,125	466	5,315	600	8,842	998
K402_0230 MT20	23.29	559/24	3,500	3,300	5,000	10/4	2.1	166	18.8	4,326	488	5,315	600	9,744	1,100
K402_0230 MT30	23.29	559/24	3,500	3,300	4,000	10/4	6.9	170	19.2	4,326	488	5,315	600	9,744	1,100
K402_0230 MT40	23.29	559/24	3,000	3,000	3,500	10/4	10.9	173	19.6	4,326	488	5,315	600	9,744	1,100
K402_0250 MT20	25.28	4171/165	3,500	3,300	5,000	10/4	1.7	143	16.2	4,079	460	5,315	600	8,868	1,001
K402_0250 MT30	25.28	4171/165	3,500	3,300	4,000	10/4	6.5	146	16.4	4,434	501	5,315	600	8,868	1,001
K402_0250 MT40	25.28	4171/165	3,000	3,000	3,500	10/4	10.5	148	16.7	4,434	501	5,315	600	8,868	1,001
K402_0280 MT20	27.77	1333/48	3,500	3,300	5,000	10/4	1.9	169	19.1	4,587	518	5,315	600	9,744	1,100
K402_0280 MT30	27.77	1333/48	3,500	3,300	4,000	10/4	6.7	172	19.4	4,587	518	5,315	600	9,744	1,100
K402_0280 MT40	27.77	1333/48	3,000	3,000	3,500	10/4	10.7	174	19.7	4,587	518	5,315	600	9,744	1,100
K402_0340 MT20	33.68	4816/143	3,500	3,300	5,000	10/4	1.5	146	16.5	3,445	389	4,134	467	5,620	634
K402_0340 MT30	33.68	4816/143	3,500	3,300	4,000	10/4	6.3	147	16.6	3,445	389	4,134	467	5,620	634
K402_0350 MT20	34.76	4171/120	3,500	3,300	5,000	10/4	1.7	172	19.4	4,872	550	5,315	600	9,744	1,100
K402_0350 MT30	34.76	4171/120	3,500	3,300	4,000	10/4	6.5	173	19.6	4,872	550	5,315	600	9,744	1,100
K402_0350 MT40	34.76	4171/120	3,000	3,000	3,500	10/4	10.5	175	19.7	4,872	550	5,315	600	9,744	1,100
K402_0410 MT20	40.51	4902/121	3,500	3,300	5,000	10/4	1.4	147	16.6	2,729	308	3,274	370	5,457	616
K402_0410 MT30	40.51	4902/121	3,500	3,300	4,000	10/4	6.2	148	16.7	2,729	308	3,274	370	5,457	616
K402_0460 MT20	46.31	602/13	3,500	3,300	5,000	10/4	1.5	174	19.6	4,737	535	5,315	600	7,728	872
K402_0460 MT30	46.31	602/13	3,500	3,300	4,000	10/4	6.3	175	19.7	4,737	535	5,315	600	7,728	872
K402_0500 MT20	50.43	5547/110	3,500	3,300	5,000	10/4	1.4	148	16.7	2,387	270	2,865	323	4,064	459
K402_0560 MT20	55.71	2451/44	3,500	3,300	5,000	10/4	1.4	174	19.7	3,752	424	4,502	508	7,504	847
K402_0560 MT30	55.71	2451/44	3,500	3,300	4,000	10/4	6.2	175	19.8	3,752	424	4,502	508	7,504	847
K402_0690 MT20	69.34	5547/80	3,500	3,300	5,000	10/4	1.3	175	19.8	3,283	371	3,939	445	5,588	631
K403 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 51 dB(A)** [4]	
K403_0320 MT20	32.39	2494/77	3,500	3,300	5,000	10/5	1.6	146	16.4	3,477	393	3,477	393	4,346	491
K403_0360 MT20	35.72	13717/384	3,500	3,300	5,000	10/5	1.6	172	19.4	3,965	448	3,965	448	4,956	560
K403_0390 MT20	39.05	38657/990	3,500	3,300	5,000	10/5	1.5	147	16.6	4,033	455	4,033	455	5,042	569
K403_0450 MT20	44.54	1247/28	3,500	3,300	5,000	10/5	1.5	173	19.6	4,781	540	4,781	540	5,976	675
K403_0490 MT20	48.94	169592/3465	3,500	3,300	5,000	10/5	1.5	148	16.7	4,872	550	4,890	552	6,112	690
K403_0540 MT20	53.69	38657/720	3,500	3,300	5,000	10/5	1.5	174	19.7	4,872	550	5,315	600	6,932	783
K403_0650 MT20	65.50	32422/495	3,500	3,300	5,000	10/5	1.4	148	16.8	4,872	550	5,315	600	7,681	867
K403_0660 MT10	66.35	26273/396	3,600	3,300	5,000	10/5	0.7	148	16.8	2,406	272	2,406	272	3,007	340
K403_0670 MT20	67.30	21199/315	3,500	3,300	5,000	10/5	1.4	175	19.8	4,872	550	5,315	600	8,404	949
K403_0680 MT10	68.17	34357/504	3,600	3,300	5,000	10/5	0.7	175	19.7	2,472	279	2,472	279	3,090	349
K403_0780 MT20	78.10	38657/495	3,500	3,300	5,000	10/5	1.4	149	16.8	4,872	550	5,315	600	8,842	998
K403_0790 MT10	79.11	62651/792	3,600	3,300	5,000	10/5	0.7	149	16.8	2,869	324	2,869	324	3,586	405
K403_0900 MT20	90.06	16211/180	3,500	3,300	5,000	10/5	1.4	176	19.8	4,872	550	5,315	600	9,744	1,100
K403_0910 MT10	91.23	26273/288	3,600	3,300	5,000	10/5	0.7	176	19.8	3,308	373	3,308	373	4,135	467
K403_1070 MT20	107.4	38657/360	3,500	3,300	5,000	10/5	1.4	176	19.8	4,872	550	5,315	600	9,744	1,100

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



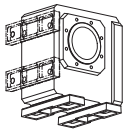
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K403 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 51 dB(A)** [4]	
K403_1090 MT10	108.8	62651/576	3,600	3,300	5,000	10/5	0.7	176	19.8	3,944	445	3,944	445	4,930	557
K403_1340 MT20	134.4	120959/900	3,500	3,300	5,000	10/5	1.4	176	19.9	4,872	550	5,315	600	9,744	1,100
K403_1360 MT10	136.1	196037/1440	3,600	3,300	5,000	10/5	0.7	176	19.9	4,581	517	4,937	557	6,171	697
K403_1790 MT20	179.1	34916/195	3,500	3,300	5,000	10/5	1.4	176	19.9	4,737	535	5,315	600	7,727	872
K403_1810 MT10	181.4	14147/78	3,600	3,300	5,000	10/5	0.7	176	19.9	4,737	535	5,315	600	7,727	872
K403_2150 MT20	215.4	23693/110	3,500	3,300	5,000	10/5	1.4	176	19.9	3,752	424	4,502	508	7,504	847
K403_2180 MT10	218.2	38399/176	3,600	3,300	5,000	10/5	0.7	176	19.9	3,752	424	4,502	508	7,504	847
K403_2720 MT10	271.6	86903/320	3,600	3,300	5,000	10/5	0.7	176	19.9	3,283	371	3,939	445	5,587	631
K513 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 61 dB(A)** [4]	
K513_0073 MT30	7.347	551/75	1,900	1,800	3,000	10/5	23.1	172	19.4	5,461	617	6,502	734	11,147	1,258
K513_0073 MT40	7.347	551/75	1,900	1,800	3,000	10/5	27.1	213	24.0	5,461	617	8,858	1,000	11,147	1,258
K513_0081 MT30	8.134	17081/2100	1,900	1,800	3,000	10/5	21.2	185	20.8	5,649	638	7,198	813	12,341	1,393
K513_0081 MT40	8.134	17081/2100	1,900	1,800	3,000	10/5	25.2	222	25.0	5,649	638	8,858	1,000	12,341	1,393
K513_0092 MT30	9.168	1421/155	1,900	1,800	3,000	10/5	18.2	198	22.3	5,879	664	8,113	916	13,494	1,523
K513_0092 MT40	9.168	1421/155	1,900	1,800	3,000	10/5	22.2	230	26.0	5,879	664	8,858	1,000	13,494	1,523
K513_0100 MT30	10.15	203/20	1,900	1,800	3,000	10/5	17.0	208	23.5	6,082	687	8,858	1,000	14,939	1,686
K513_0100 MT40	10.15	203/20	1,900	1,800	3,000	10/5	21.0	237	26.7	6,082	687	8,858	1,000	14,939	1,686
K513_0115 MT30	11.57	10759/930	2,300	2,200	3,600	10/5	14.5	220	24.8	6,353	717	8,858	1,000	15,944	1,800
K513_0115 MT40	11.57	10759/930	2,300	2,200	3,500	10/5	18.5	244	27.5	6,353	717	8,858	1,000	15,944	1,800
K513_0130 MT30	12.81	1537/120	2,300	2,200	3,600	10/5	13.7	228	25.7	6,573	742	8,858	1,000	15,944	1,800
K513_0130 MT40	12.81	1537/120	2,300	2,200	3,500	10/5	17.7	248	28.0	6,573	742	8,858	1,000	15,944	1,800
K513_0145 MT20	14.54	5887/405	2,300	2,200	3,600	10/5	7.2	219	24.7	4,924	556	5,416	611	7,682	867
K513_0145 MT30	14.54	5887/405	2,300	2,200	3,600	10/5	12.0	236	26.6	6,856	774	8,858	1,000	15,944	1,800
K513_0145 MT40	14.54	5887/405	2,300	2,200	3,500	10/5	16.0	253	28.6	6,856	774	8,858	1,000	15,944	1,800
K513_0160 MT20	16.09	26071/1620	2,300	2,200	3,600	10/5	6.7	227	25.6	5,451	615	5,996	677	8,505	960
K513_0160 MT30	16.09	26071/1620	2,300	2,200	3,600	10/5	11.5	242	27.3	7,092	801	8,858	1,000	15,944	1,800
K513_0160 MT40	16.09	26071/1620	2,300	2,200	3,500	10/5	15.5	256	28.9	7,092	801	8,858	1,000	15,944	1,800
K513_0175 MT20	17.48	6293/360	2,800	2,500	4,000	10/5	5.8	232	26.2	5,921	668	6,513	735	8,970	1,013
K513_0175 MT30	17.48	6293/360	2,800	2,500	4,000	10/5	10.6	246	27.7	7,291	823	8,858	1,000	15,944	1,800
K513_0175 MT40	17.48	6293/360	2,800	2,500	3,500	10/5	14.6	258	29.1	7,291	823	8,858	1,000	15,944	1,800
K513_0195 MT20	19.35	27869/1440	2,800	2,500	4,000	10/5	5.4	239	26.9	6,555	740	7,211	814	9,931	1,121
K513_0195 MT30	19.35	27869/1440	2,800	2,500	4,000	10/5	10.2	250	28.2	7,542	851	8,858	1,000	15,944	1,800
K513_0195 MT40	19.35	27869/1440	2,800	2,500	3,500	10/5	14.2	260	29.4	7,542	851	8,858	1,000	15,944	1,800
K513_0220 MT20	21.99	2639/120	2,800	2,500	4,000	10/5	4.4	245	27.7	7,089	800	8,194	925	10,782	1,217
K513_0220 MT30	21.99	2639/120	2,800	2,500	4,000	10/5	9.2	254	28.7	7,870	888	8,858	1,000	15,944	1,800
K513_0220 MT40	21.99	2639/120	2,800	2,500	3,500	10/5	13.2	263	29.6	7,870	888	8,858	1,000	15,944	1,800
K513_0240 MT20	24.35	11687/480	2,800	2,500	4,000	10/5	4.2	249	28.2	7,849	886	8,858	1,000	11,937	1,348
K513_0240 MT30	24.35	11687/480	2,800	2,500	4,000	10/5	9.0	257	29.0	7,972	900	8,858	1,000	15,944	1,800
K513_0240 MT40	24.35	11687/480	2,800	2,500	3,500	10/5	13.0	264	29.8	7,972	900	8,858	1,000	15,944	1,800
K513_0290 MT20	29.18	4669/160	3,400	3,000	4,500	10/5	3.3	256	28.8	7,525	850	8,858	1,000	13,530	1,527
K513_0290 MT30	29.18	4669/160	3,400	3,000	4,000	10/5	8.1	261	29.5	7,972	900	8,858	1,000	15,944	1,800
K513_0290 MT40	29.18	4669/160	3,000	3,000	3,500	10/5	12.1	266	30.0	7,972	900	8,858	1,000	15,944	1,800

Motor Shaft

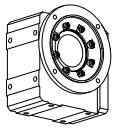
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

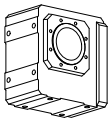
N Foot Mounted



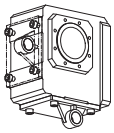
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1	C_2							
							kgcm²	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K513 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 61 dB(A)** [4]	
K513_0320 MT20	32.31	20677/640	3,400	3,000	4,500	10/5	3.2	258	29.1	7,972	900	8,858	1,000	14,980	1,691
K513_0320 MT30	32.31	20677/640	3,400	3,000	4,000	10/5	8.0	263	29.7	7,972	900	8,858	1,000	15,944	1,800
K513_0320 MT40	32.31	20677/640	3,000	3,000	3,500	10/5	12.0	267	30.1	7,972	900	8,858	1,000	15,944	1,800
K513_0350 MT20	34.80	174/5	3,400	3,000	4,500	10/5	2.8	260	29.3	7,852	886	8,858	1,000	15,606	1,762
K513_0350 MT30	34.80	174/5	3,400	3,000	4,000	10/5	7.6	264	29.8	7,972	900	8,858	1,000	15,606	1,762
K513_0350 MT40	34.80	174/5	3,000	3,000	3,500	10/5	11.6	267	30.2	7,972	900	8,858	1,000	15,606	1,762
K513_0390 MT20	38.53	2697/70	3,400	3,000	4,500	10/5	2.7	262	29.5	7,972	900	8,858	1,000	15,944	1,800
K513_0390 MT30	38.53	2697/70	3,400	3,000	4,000	10/5	7.5	265	29.9	7,972	900	8,858	1,000	15,944	1,800
K513_0390 MT40	38.53	2697/70	3,000	3,000	3,500	10/5	11.5	268	30.2	7,972	900	8,858	1,000	15,944	1,800
K513_0440 MT20	43.50	87/2	3,400	3,000	4,500	10/5	2.3	264	29.8	7,972	900	8,858	1,000	15,944	1,800
K513_0440 MT30	43.50	87/2	3,400	3,000	4,000	10/5	7.1	266	30.1	7,972	900	8,858	1,000	15,944	1,800
K513_0440 MT40	43.50	87/2	3,000	3,000	3,500	10/5	11.1	268	30.3	7,972	900	8,858	1,000	15,944	1,800
K513_0480 MT20	48.16	2697/56	3,400	3,000	4,500	10/5	2.2	265	29.9	7,972	900	8,858	1,000	15,944	1,800
K513_0480 MT30	48.16	2697/56	3,400	3,000	4,000	10/5	7.0	267	30.1	7,972	900	8,858	1,000	15,944	1,800
K513_0480 MT40	48.16	2697/56	3,000	3,000	3,500	10/5	11.0	269	30.3	7,972	900	8,858	1,000	15,944	1,800
K513_0580 MT20	58.30	11368/195	3,400	3,000	4,500	10/5	1.9	267	30.1	7,972	900	8,858	1,000	15,944	1,800
K513_0580 MT30	58.30	11368/195	3,400	3,000	4,000	10/5	6.7	268	30.3	7,972	900	8,858	1,000	15,944	1,800
K513_0580 MT40	58.30	11368/195	3,000	3,000	3,500	10/5	10.7	269	30.4	7,972	900	8,858	1,000	15,944	1,800
K513_0650 MT20	64.54	12586/195	3,400	3,000	4,500	10/5	1.8	267	30.2	7,972	900	8,858	1,000	15,944	1,800
K513_0650 MT30	64.54	12586/195	3,400	3,000	4,000	10/5	6.6	269	30.3	7,972	900	8,858	1,000	15,944	1,800
K513_0650 MT40	64.54	12586/195	3,000	3,000	3,500	10/5	10.6	270	30.4	7,972	900	8,858	1,000	15,944	1,800
K513_0700 MT20	70.08	841/12	3,400	3,000	4,500	10/5	1.7	268	30.2	7,268	821	8,722	985	11,440	1,291
K513_0700 MT30	70.08	841/12	3,400	3,000	4,000	10/5	6.5	269	30.3	7,268	821	8,722	985	11,440	1,291
K513_0780 MT20	77.59	26071/336	3,400	3,000	4,500	10/5	1.7	268	30.3	7,972	900	8,858	1,000	12,666	1,430
K513_0780 MT30	77.59	26071/336	3,400	3,000	4,000	10/5	6.5	269	30.4	7,972	900	8,858	1,000	12,666	1,430
K513_0870 MT20	87.29	8729/100	3,400	3,000	4,500	10/5	1.5	269	30.3	6,105	689	7,326	827	12,211	1,378
K513_0870 MT30	87.29	8729/100	3,400	3,000	4,000	10/5	6.3	269	30.4	6,105	689	7,326	827	12,211	1,378
K513_0970 MT20	96.64	38657/400	3,400	3,000	4,500	10/5	1.5	269	30.4	6,761	763	8,113	916	13,522	1,527
K513_0970 MT30	96.64	38657/400	3,400	3,000	4,000	10/5	6.3	270	30.4	6,761	763	8,113	916	13,522	1,527
K514 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 61 dB(A)** [4]	
K514_0850 MT20	85.03	76531/900	3,400	3,000	4,500	10/6	1.6	269	30.3	7,972	900	8,625	974	10,781	1,217
K514_0940 MT20	94.15	338923/3600	3,400	3,000	4,500	10/6	1.6	269	30.4	7,972	900	8,858	1,000	11,936	1,347
K514_1130 MT20	112.8	135401/1200	3,400	3,000	4,500	10/6	1.5	269	30.4	7,972	900	8,858	1,000	13,529	1,527
K514_1250 MT20	124.9	599633/4800	3,400	3,000	4,500	10/6	1.5	270	30.4	7,972	900	8,858	1,000	14,979	1,691
K514_1350 MT20	134.6	3364/25	3,400	3,000	4,500	10/6	1.5	270	30.5	7,972	900	8,858	1,000	15,604	1,762
K514_1490 MT20	149.0	26071/175	3,400	3,000	4,500	10/6	1.5	270	30.5	7,972	900	8,858	1,000	15,944	1,800
K514_1680 MT20	168.2	841/5	3,400	3,000	4,500	10/6	1.4	270	30.5	7,972	900	8,858	1,000	15,944	1,800
K514_1860 MT20	186.2	26071/140	3,400	3,000	4,500	10/6	1.4	270	30.5	7,972	900	8,858	1,000	15,944	1,800
K514_2250 MT20	225.4	659344/2925	3,400	3,000	4,500	10/6	1.4	270	30.5	7,972	900	8,858	1,000	15,944	1,800
K514_2500 MT20	249.6	729988/2925	3,400	3,000	4,500	10/6	1.4	270	30.5	7,972	900	8,858	1,000	15,944	1,800
K514_2710 MT20	271.0	24389/90	3,400	3,000	4,500	10/6	1.4	270	30.5	7,268	821	8,722	985	11,439	1,291

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



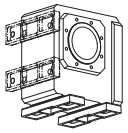
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K514 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 61 dB(A)** [4]	
K514_3000 MT20	300.0	756059/2520	3,400	3,000	4,500	10/6	1.4	270	30.5	7,972	900	8,858	1,000	12,665	1,430
K514_3380 MT20	337.5	253141/750	3,400	3,000	4,500	10/6	1.4	270	30.5	6,105	689	7,326	827	12,211	1,378
K514_3740 MT20	373.7	1121053/3000	3,400	3,000	4,500	10/6	1.4	270	30.5	6,761	763	8,113	916	13,522	1,527
K613 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 61 dB(A)** [4]	
K613_0073 MT30	7.323	19215/2624	1,800	1,700	2,900	10/5	37.9	216	24.4	5,891	665	6,480	732	11,477	1,296
K613_0073 MT40	7.323	19215/2624	1,800	1,700	2,900	10/5	41.9	285	32.2	7,208	814	9,182	1,037	11,477	1,296
K613_0073 MT50	7.323	19215/2624	1,800	1,700	2,900	10/5	51.9	354	39.9	7,208	814	12,178	1,375	21,932	2,476
K613_0081 MT30	8.107	85095/10496	1,800	1,700	2,900	10/5	34.8	236	26.6	6,522	736	7,174	810	12,706	1,434
K613_0081 MT40	8.107	85095/10496	1,800	1,700	2,900	10/5	38.8	301	33.9	7,457	842	10,165	1,148	12,706	1,434
K613_0081 MT50	8.107	85095/10496	1,800	1,700	2,900	10/5	48.8	361	40.8	7,457	842	12,597	1,422	24,280	2,741
K613_0091 MT30	9.081	20923/2304	1,800	1,700	2,900	10/5	28.8	257	29.0	7,306	825	8,036	907	13,823	1,561
K613_0091 MT40	9.081	20923/2304	1,800	1,700	2,900	10/5	32.8	317	35.7	7,744	874	11,059	1,248	13,823	1,561
K613_0091 MT50	9.081	20923/2304	1,800	1,700	2,900	10/5	42.8	369	41.6	7,744	874	13,083	1,477	25,688	2,900
K613_0100 MT30	10.05	92659/9216	1,800	1,700	2,900	10/5	26.8	275	31.1	8,012	904	8,897	1,004	15,305	1,728
K613_0100 MT40	10.05	92659/9216	1,800	1,700	2,900	10/5	30.8	329	37.2	8,012	904	12,244	1,382	15,305	1,728
K613_0100 MT50	10.05	92659/9216	1,800	1,700	2,900	10/5	40.8	374	42.2	8,012	904	13,534	1,528	25,688	2,900
K613_0115 MT30	11.41	22631/1984	2,200	2,000	3,200	10/5	22.1	296	33.4	8,356	943	10,094	1,140	16,789	1,895
K613_0115 MT40	11.41	22631/1984	2,200	2,000	3,200	10/5	26.1	343	38.7	8,356	943	13,431	1,516	16,789	1,895
K613_0115 MT50	11.41	22631/1984	2,200	2,000	3,000	10/5	36.1	379	42.8	8,356	943	13,431	1,516	16,789	1,895
K613_0125 MT30	12.63	3233/256	2,200	2,000	3,200	10/5	20.9	311	35.1	8,644	976	11,176	1,262	18,588	2,098
K613_0125 MT40	12.63	3233/256	2,200	2,000	3,200	10/5	24.9	352	39.7	8,644	976	14,173	1,600	18,588	2,098
K613_0125 MT50	12.63	3233/256	2,200	2,000	3,000	10/5	34.9	383	43.2	8,644	976	14,173	1,600	18,588	2,098
K613_0145 MT30	14.33	12383/864	2,200	2,000	3,200	10/5	17.4	327	36.9	9,017	1,018	12,683	1,432	20,378	2,301
K613_0145 MT40	14.33	12383/864	2,200	2,000	3,200	10/5	21.4	361	40.8	9,017	1,018	14,173	1,600	20,378	2,301
K613_0145 MT50	14.33	12383/864	2,200	2,000	3,000	10/5	31.4	386	43.6	9,017	1,018	14,173	1,600	20,378	2,301
K613_0160 MT30	15.87	54839/3456	2,200	2,000	3,200	10/5	16.6	338	38.2	9,328	1,053	14,042	1,585	22,562	2,547
K613_0160 MT40	15.87	54839/3456	2,200	2,000	3,200	10/5	20.6	368	41.5	9,328	1,053	14,173	1,600	22,562	2,547
K613_0160 MT50	15.87	54839/3456	2,200	2,000	3,000	10/5	30.6	389	43.9	9,328	1,053	14,173	1,600	22,562	2,547
K613_0170 MT20	17.16	549/32	2,600	2,300	3,600	10/5	9.7	319	36.0	5,811	656	6,392	722	9,119	1,029
K613_0170 MT30	17.16	549/32	2,600	2,300	3,600	10/5	14.5	346	39.0	9,574	1,081	14,173	1,600	23,519	2,655
K613_0170 MT40	17.16	549/32	2,600	2,300	3,500	10/5	18.5	372	42.0	9,574	1,081	14,173	1,600	23,519	2,655
K613_0170 MT50	17.16	549/32	2,500	2,300	3,000	10/5	28.5	390	44.1	9,574	1,081	14,173	1,600	23,519	2,655
K613_0190 MT20	18.99	17019/896	2,600	2,300	3,600	10/5	9.2	331	37.4	6,434	726	7,077	799	10,095	1,140
K613_0190 MT30	18.99	17019/896	2,600	2,300	3,600	10/5	14.0	355	40.0	9,904	1,118	14,173	1,600	25,688	2,900
K613_0190 MT40	18.99	17019/896	2,600	2,300	3,500	10/5	18.0	377	42.5	9,904	1,118	14,173	1,600	25,688	2,900
K613_0190 MT50	18.99	17019/896	2,500	2,300	3,000	10/5	28.0	392	44.2	9,904	1,118	14,173	1,600	25,688	2,900
K613_0220 MT20	21.68	5551/256	2,600	2,300	3,600	10/5	7.3	345	39.0	7,345	829	8,080	912	11,090	1,252
K613_0220 MT30	21.68	5551/256	2,600	2,300	3,600	10/5	12.1	364	41.1	10,351	1,169	14,173	1,600	25,688	2,900
K613_0220 MT40	21.68	5551/256	2,600	2,300	3,500	10/5	16.1	382	43.1	10,351	1,169	14,173	1,600	25,688	2,900
K613_0220 MT50	21.68	5551/256	2,500	2,300	3,000	10/5	26.1	394	44.4	10,351	1,169	14,173	1,600	25,688	2,900

Motor Shaft

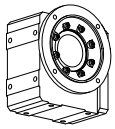
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

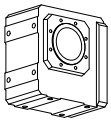
N Foot Mounted



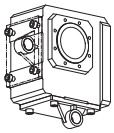
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	$T_{2N \le 2000\ RPM}$ in.lbs.	$T_{2N \le 2000\ RPM}$ Nm	T_{2B} in.lbs.	T_{2B} Nm	T_{2PEAK} in.lbs.	T_{2PEAK} Nm
K613 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 61 dB(A)** [4]	
K613_0240 MT20	24.01	24583/1024	2,600	2,300	3,600	10/5	6.9	354	40.0	8,132	918	8,945	1,010	12,278	1,386
K613_0240 MT30	24.01	24583/1024	2,600	2,300	3,600	10/5	11.7	370	41.8	10,708	1,209	14,173	1,600	25,688	2,900
K613_0240 MT40	24.01	24583/1024	2,600	2,300	3,500	10/5	15.7	385	43.5	10,708	1,209	14,173	1,600	25,688	2,900
K613_0240 MT50	24.01	24583/1024	2,500	2,300	3,000	10/5	25.7	395	44.6	10,708	1,209	14,173	1,600	25,688	2,900
K613_0290 MT20	28.77	29463/1024	3,100	2,800	4,000	10/5	5.1	367	41.4	8,786	992	10,721	1,210	13,916	1,571
K613_0290 MT30	28.77	29463/1024	3,100	2,800	4,000	10/5	9.9	379	42.7	11,374	1,284	14,173	1,600	25,688	2,900
K613_0290 MT40	28.77	29463/1024	3,000	2,800	3,500	10/5	13.9	389	43.9	11,374	1,284	14,173	1,600	25,688	2,900
K613_0290 MT50	28.77	29463/1024	2,500	2,500	3,000	10/5	23.9	396	44.7	11,374	1,284	14,173	1,600	25,688	2,900
K613_0320 MT20	31.86	130479/4096	3,100	2,800	4,000	10/5	4.9	372	42.0	9,727	1,098	11,869	1,340	15,407	1,739
K613_0320 MT30	31.86	130479/4096	3,100	2,800	4,000	10/5	9.7	382	43.2	11,767	1,328	14,173	1,600	25,688	2,900
K613_0320 MT40	31.86	130479/4096	3,000	2,800	3,500	10/5	13.7	391	44.2	11,767	1,328	14,173	1,600	25,688	2,900
K613_0320 MT50	31.86	130479/4096	2,500	2,500	3,000	10/5	23.7	397	44.8	11,767	1,328	14,173	1,600	25,688	2,900
K613_0350 MT20	34.61	35441/1024	3,100	2,800	4,000	10/5	4.1	376	42.5	8,925	1,008	12,838	1,449	16,048	1,812
K613_0350 MT30	34.61	35441/1024	3,100	2,800	4,000	10/5	8.9	385	43.4	12,097	1,366	14,173	1,600	25,688	2,900
K613_0350 MT40	34.61	35441/1024	3,000	2,800	3,500	10/5	12.9	392	44.3	12,097	1,366	14,173	1,600	25,688	2,900
K613_0350 MT50	34.61	35441/1024	2,500	2,500	3,000	10/5	22.9	397	44.8	12,097	1,366	14,173	1,600	25,688	2,900
K613_0380 MT20	38.32	156953/4096	3,100	2,800	4,000	10/5	3.9	380	42.9	9,882	1,116	14,173	1,600	17,767	2,006
K613_0380 MT30	38.32	156953/4096	3,100	2,800	4,000	10/5	8.7	387	43.7	12,514	1,413	14,173	1,600	25,688	2,900
K613_0380 MT40	38.32	156953/4096	3,000	2,800	3,500	10/5	12.7	394	44.4	12,514	1,413	14,173	1,600	25,688	2,900
K613_0380 MT50	38.32	156953/4096	2,500	2,500	3,000	10/5	22.7	398	44.9	12,514	1,413	14,173	1,600	25,688	2,900
K613_0430 MT20	43.11	8967/208	3,100	2,800	4,000	10/5	3.2	384	43.4	9,168	1,035	14,173	1,600	19,048	2,150
K613_0430 MT30	43.11	8967/208	3,100	2,800	4,000	10/5	8.0	390	44.0	12,844	1,450	14,173	1,600	19,048	2,150
K613_0430 MT40	43.11	8967/208	3,000	2,800	3,500	10/5	12.0	395	44.6	12,844	1,450	14,173	1,600	19,048	2,150
K613_0480 MT20	47.73	39711/832	3,100	2,800	4,000	10/5	3.1	387	43.7	10,150	1,146	14,173	1,600	21,089	2,381
K613_0480 MT30	47.73	39711/832	3,100	2,800	4,000	10/5	7.9	392	44.2	12,844	1,450	14,173	1,600	21,089	2,381
K613_0480 MT40	47.73	39711/832	3,000	2,800	3,500	10/5	11.9	396	44.7	12,844	1,450	14,173	1,600	21,089	2,381
K613_0580 MT20	57.55	29463/512	3,100	2,800	4,000	10/5	2.4	391	44.1	9,542	1,077	14,173	1,600	23,893	2,697
K613_0580 MT30	57.55	29463/512	3,100	2,800	4,000	10/5	7.2	394	44.5	12,844	1,450	14,173	1,600	23,893	2,697
K613_0580 MT40	57.55	29463/512	3,000	2,800	3,500	10/5	11.2	397	44.8	12,844	1,450	14,173	1,600	23,893	2,697
K613_0640 MT20	63.71	130479/2048	3,100	2,800	4,000	10/5	2.4	392	44.3	10,565	1,193	14,173	1,600	25,688	2,900
K613_0640 MT30	63.71	130479/2048	3,100	2,800	4,000	10/5	7.2	395	44.6	12,844	1,450	14,173	1,600	25,688	2,900
K613_0640 MT40	63.71	130479/2048	3,000	2,800	3,500	10/5	11.2	397	44.9	12,844	1,450	14,173	1,600	25,688	2,900
K613_0690 MT20	68.77	28609/416	3,100	2,800	4,000	10/5	2.1	393	44.4	9,750	1,101	13,967	1,577	23,278	2,628
K613_0690 MT30	68.77	28609/416	3,100	2,800	4,000	10/5	6.9	396	44.7	11,639	1,314	13,967	1,577	23,278	2,628
K613_0690 MT40	68.77	28609/416	3,000	2,800	3,500	10/5	10.9	398	44.9	11,639	1,314	13,967	1,577	23,278	2,628
K613_0760 MT20	76.14	126697/1664	3,100	2,800	4,000	10/5	2.0	394	44.5	10,794	1,219	14,173	1,600	25,688	2,900
K613_0760 MT30	76.14	126697/1664	3,100	2,800	4,000	10/5	6.8	396	44.7	12,844	1,450	14,173	1,600	25,688	2,900
K613_0760 MT40	76.14	126697/1664	3,000	2,800	3,500	10/5	10.8	398	44.9	12,844	1,450	14,173	1,600	25,688	2,900
K613_0860 MT20	86.18	66185/768	3,100	2,800	4,000	10/5	1.8	395	44.6	8,600	971	10,320	1,165	13,893	1,568
K613_0860 MT30	86.18	66185/768	3,100	2,800	4,000	10/5	6.6	397	44.8	8,600	971	10,320	1,165	13,893	1,568
K613_0950 MT20	95.41	293105/3072	3,100	2,800	4,000	10/5	1.8	396	44.7	9,524	1,075	11,429	1,290	15,382	1,736
K613_0950 MT30	95.41	293105/3072	3,100	2,800	4,000	10/5	6.6	397	44.9	9,524	1,075	11,429	1,290	15,382	1,736

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



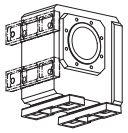
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K614 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 61 dB(A)** [4]	
K614_0840 MT20	83.84	160979/1920	3,100	2,800	4,000	10/6	1.8	395	44.6	8,871	1,001	8,871	1,001	11,088	1,252
K614_0930 MT20	92.83	712907/7680	3,100	2,800	4,000	10/6	1.7	396	44.7	9,821	1,109	9,821	1,109	12,277	1,386
K614_1110 MT20	111.3	284809/2560	3,100	2,800	4,000	10/6	1.6	397	44.8	11,132	1,257	11,132	1,257	13,915	1,571
K614_1230 MT20	123.2	1261297/10240	3,100	2,800	4,000	10/6	1.6	397	44.9	12,325	1,391	12,325	1,391	15,406	1,739
K614_1340 MT20	133.8	1027789/7680	3,100	2,800	4,000	10/6	1.6	398	44.9	12,837	1,449	12,837	1,449	16,046	1,812
K614_1480 MT20	148.2	4551637/30720	3,100	2,800	4,000	10/6	1.5	398	44.9	12,844	1,450	14,173	1,600	17,766	2,006
K614_1670 MT20	166.7	86681/520	3,100	2,800	4,000	10/6	1.5	398	45.0	12,844	1,450	14,173	1,600	19,047	2,150
K614_1850 MT20	184.6	383873/2080	3,100	2,800	4,000	10/6	1.5	399	45.0	12,844	1,450	14,173	1,600	21,087	2,381
K614_2230 MT20	222.5	284809/1280	3,100	2,800	4,000	10/6	1.4	399	45.0	12,844	1,450	14,173	1,600	23,891	2,697
K614_2460 MT20	246.3	1261297/5120	3,100	2,800	4,000	10/6	1.4	399	45.0	12,844	1,450	14,173	1,600	25,688	2,900
K614_2660 MT20	265.9	829661/3120	3,100	2,800	4,000	10/6	1.4	399	45.0	11,639	1,314	13,967	1,577	23,278	2,628
K614_2940 MT20	294.4	3674213/12480	3,100	2,800	4,000	10/6	1.4	399	45.1	12,844	1,450	14,173	1,600	25,688	2,900
K614_3330 MT20	333.2	383873/1152	3,100	2,800	4,000	10/6	1.4	399	45.1	8,600	971	10,320	1,165	13,892	1,568
K614_3690 MT20	368.9	1700009/4608	3,100	2,800	4,000	10/6	1.4	399	45.1	9,524	1,075	11,429	1,290	15,380	1,736
K713 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 59 dB(A)** [4]	
K713_0076 MT30	7.563	19845/2624	1,700	1,600	2,700	10/5	71.2	295	33.4	6,084	687	6,693	756	12,169	1,374
K713_0076 MT40	7.563	19845/2624	1,700	1,600	2,700	10/5	75.2	428	48.3	9,837	1,111	9,837	1,111	12,297	1,388
K713_0076 MT50	7.563	19845/2624	1,700	1,600	2,700	10/5	85.2	590	66.7	11,924	1,346	18,798	2,122	23,498	2,653
K713_0084 MT30	8.373	87885/10496	1,700	1,600	2,700	10/5	66.3	331	37.4	6,736	760	7,410	836	13,472	1,521
K713_0084 MT40	8.373	87885/10496	1,700	1,600	2,700	10/5	70.3	463	52.2	10,891	1,230	10,891	1,230	13,614	1,537
K713_0084 MT50	8.373	87885/10496	1,700	1,600	2,700	10/5	80.3	611	68.9	12,336	1,393	20,812	2,349	26,014	2,937
K713_0092 MT30	9.188	147/16	1,700	1,600	2,700	10/5	54.4	365	41.2	7,392	834	8,131	918	14,515	1,639
K713_0092 MT40	9.188	147/16	1,700	1,600	2,700	10/5	58.4	492	55.6	11,612	1,311	11,612	1,311	14,515	1,639
K713_0092 MT50	9.188	147/16	1,700	1,600	2,700	10/5	68.4	627	70.7	12,724	1,436	21,495	2,427	27,736	3,131
K713_0100 MT30	10.17	651/64	1,700	1,600	2,700	10/5	51.2	401	45.3	8,183	924	9,002	1,016	16,069	1,814
K713_0100 MT40	10.17	651/64	1,700	1,600	2,700	10/5	55.2	523	59.0	12,855	1,451	12,855	1,451	16,069	1,814
K713_0100 MT50	10.17	651/64	1,700	1,600	2,700	10/5	65.2	642	72.4	13,163	1,486	22,237	2,510	30,706	3,467
K713_0120 MT30	11.78	23373/1984	2,000	1,900	3,000	10/5	39.2	452	51.0	9,478	1,070	10,425	1,177	17,928	2,024
K713_0120 MT40	11.78	23373/1984	2,000	1,900	3,000	10/5	43.2	562	63.4	13,823	1,561	14,342	1,619	17,928	2,024
K713_0120 MT50	11.78	23373/1984	2,000	1,900	3,000	10/5	53.2	660	74.5	13,823	1,561	23,031	2,600	34,258	3,868
K713_0130 MT30	13.04	3339/256	2,000	1,900	3,000	10/5	37.2	485	54.8	10,493	1,185	11,542	1,303	19,849	2,241
K713_0130 MT40	13.04	3339/256	2,000	1,900	3,000	10/5	41.2	585	66.1	14,300	1,614	15,879	1,793	19,849	2,241
K713_0130 MT50	13.04	3339/256	2,000	1,900	3,000	10/5	51.2	670	75.6	14,300	1,614	23,031	2,600	37,928	4,282
K713_0150 MT30	14.80	1421/96	2,000	1,900	3,000	10/5	29.8	523	59.1	11,908	1,344	13,099	1,479	21,761	2,457
K713_0150 MT40	14.80	1421/96	2,000	1,900	3,000	10/5	33.8	611	68.9	14,916	1,684	17,409	1,965	21,761	2,457
K713_0150 MT50	14.80	1421/96	2,000	1,900	3,000	10/5	43.8	680	76.8	14,916	1,684	23,031	2,600	41,582	4,694
K713_0165 MT30	16.39	6293/384	2,000	1,900	3,000	10/5	28.5	551	62.2	13,184	1,488	14,502	1,637	24,092	2,720
K713_0165 MT40	16.39	6293/384	2,000	1,900	3,000	10/5	32.5	628	70.9	15,431	1,742	19,274	2,176	24,092	2,720
K713_0165 MT50	16.39	6293/384	2,000	1,900	3,000	10/5	42.5	687	77.6	15,431	1,742	23,031	2,600	42,518	4,800

Motor Shaft

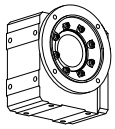
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

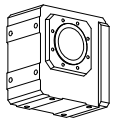
N Foot Mounted



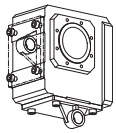
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	$T_{2N \le 2000\ RPM}$ in.lbs.	$T_{2N \le 2000\ RPM}$ Nm	T_{2B} in.lbs.	T_{2B} Nm	T_{2PEAK} in.lbs.	T_{2PEAK} Nm
K713 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 59 dB(A)** [4]	
K713_0185 MT30	18.28	26901/1472	2,400	2,200	3,400	10/5	23.8	577	65.2	14,702	1,660	16,172	1,826	25,811	2,914
K713_0185 MT40	18.28	26901/1472	2,400	2,200	3,400	10/5	27.8	644	72.7	16,001	1,806	20,649	2,331	25,811	2,914
K713_0185 MT50	18.28	26901/1472	2,400	2,200	3,000	10/5	37.8	693	78.2	16,001	1,806	23,031	2,600	42,518	4,800
K713_0200 MT30	20.23	119133/5888	2,400	2,200	3,400	10/5	23.0	599	67.6	16,277	1,838	17,905	2,021	28,576	3,226
K713_0200 MT40	20.23	119133/5888	2,400	2,200	3,400	10/5	27.0	657	74.1	16,554	1,869	22,861	2,581	28,576	3,226
K713_0200 MT50	20.23	119133/5888	2,400	2,200	3,000	10/5	37.0	698	78.8	16,554	1,869	23,031	2,600	42,518	4,800
K713_0230 MT30	22.74	14553/640	2,400	2,200	3,400	10/5	18.8	621	70.1	16,193	1,828	20,122	2,272	30,795	3,476
K713_0230 MT40	22.74	14553/640	2,400	2,200	3,400	10/5	22.8	669	75.5	17,211	1,943	23,031	2,600	30,795	3,476
K713_0230 MT50	22.74	14553/640	2,400	2,200	3,000	10/5	32.8	702	79.3	17,211	1,943	23,031	2,600	42,518	4,800
K713_0250 MT30	25.18	64449/2560	2,400	2,200	3,400	10/5	18.2	637	71.9	17,804	2,010	22,278	2,515	34,094	3,849
K713_0250 MT40	25.18	64449/2560	2,400	2,200	3,400	10/5	22.2	677	76.5	17,804	2,010	23,031	2,600	34,094	3,849
K713_0250 MT50	25.18	64449/2560	2,400	2,200	3,000	10/5	32.2	705	79.6	17,804	2,010	23,031	2,600	42,518	4,800
K713_0290 MT30	29.29	7497/256	2,900	2,600	3,800	10/5	14.5	656	74.1	17,161	1,937	23,031	2,600	37,773	4,264
K713_0290 MT40	29.29	7497/256	2,900	2,600	3,500	10/5	18.5	688	77.6	18,725	2,114	23,031	2,600	37,773	4,264
K713_0290 MT50	29.29	7497/256	2,500	2,500	3,000	10/5	28.5	709	80.0	18,725	2,114	23,031	2,600	42,518	4,800
K713_0320 MT30	32.42	33201/1024	2,900	2,600	3,800	10/5	14.2	667	75.3	19,000	2,145	23,031	2,600	41,821	4,721
K713_0320 MT40	32.42	33201/1024	2,900	2,600	3,500	10/5	18.2	693	78.3	19,371	2,187	23,031	2,600	41,821	4,721
K713_0320 MT50	32.42	33201/1024	2,500	2,500	3,000	10/5	28.2	711	80.2	19,371	2,187	23,031	2,600	42,518	4,800
K713_0350 MT30	35.44	567/16	2,900	2,600	3,800	10/5	12.2	675	76.2	17,666	1,994	23,031	2,600	42,518	4,800
K713_0350 MT40	35.44	567/16	2,900	2,600	3,500	10/5	16.2	697	78.7	19,954	2,253	23,031	2,600	42,518	4,800
K713_0350 MT50	35.44	567/16	2,500	2,500	3,000	10/5	26.2	712	80.4	19,954	2,253	23,031	2,600	42,518	4,800
K713_0390 MT30	39.23	2511/64	2,900	2,600	3,800	10/5	12.0	683	77.1	19,558	2,208	23,031	2,600	42,518	4,800
K713_0390 MT40	39.23	2511/64	2,900	2,600	3,500	10/5	16.0	701	79.2	20,642	2,330	23,031	2,600	42,518	4,800
K713_0390 MT50	39.23	2511/64	2,500	2,500	3,000	10/5	26.0	713	80.5	20,642	2,330	23,031	2,600	42,518	4,800
K713_0450 MT30	45.05	37485/832	2,900	2,600	3,800	10/5	10.2	691	78.0	18,248	2,060	23,031	2,600	42,518	4,800
K713_0450 MT40	45.05	37485/832	2,900	2,600	3,500	10/5	14.2	705	79.6	21,259	2,400	23,031	2,600	42,518	4,800
K713_0450 MT50	45.05	37485/832	2,500	2,500	3,000	10/5	24.2	715	80.7	21,259	2,400	23,031	2,600	42,518	4,800
K713_0500 MT30	49.88	166005/3328	2,900	2,600	3,800	10/5	10.1	696	78.6	20,203	2,281	23,031	2,600	42,518	4,800
K713_0500 MT40	49.88	166005/3328	2,900	2,600	3,500	10/5	14.1	708	79.9	21,259	2,400	23,031	2,600	42,518	4,800
K713_0500 MT50	49.88	166005/3328	2,500	2,500	3,000	10/5	24.1	715	80.8	21,259	2,400	23,031	2,600	42,518	4,800
K713_0590 MT30	58.57	7497/128	2,900	2,600	3,800	10/5	8.7	702	79.3	19,023	2,148	23,031	2,600	42,518	4,800
K713_0590 MT40	58.57	7497/128	2,900	2,600	3,500	10/5	12.7	711	80.3	21,259	2,400	23,031	2,600	42,518	4,800
K713_0590 MT50	58.57	7497/128	2,500	2,500	3,000	10/5	22.7	716	80.9	21,259	2,400	23,031	2,600	42,518	4,800
K713_0650 MT30	64.85	33201/512	2,900	2,600	3,800	10/5	8.6	705	79.6	21,061	2,378	23,031	2,600	42,518	4,800
K713_0650 MT40	64.85	33201/512	2,900	2,600	3,500	10/5	12.6	712	80.4	21,259	2,400	23,031	2,600	42,518	4,800
K713_0650 MT50	64.85	33201/512	2,500	2,500	3,000	10/5	22.6	717	80.9	21,259	2,400	23,031	2,600	42,518	4,800
K713_0710 MT30	71.20	4557/64	2,900	2,600	3,800	10/5	7.9	707	79.9	19,244	2,173	23,031	2,600	29,355	3,314
K713_0710 MT40	71.20	4557/64	2,900	2,600	3,500	10/5	11.9	713	80.5	19,244	2,173	23,031	2,600	29,355	3,314
K713_0790 MT30	78.83	20181/256	2,900	2,600	3,800	10/5	7.8	710	80.1	21,259	2,400	23,031	2,600	32,500	3,669
K713_0790 MT40	78.83	20181/256	2,900	2,600	3,500	10/5	11.8	714	80.7	21,259	2,400	23,031	2,600	32,500	3,669
K713_0890 MT30	89.00	22785/256	2,900	2,600	3,800	10/5	7.3	712	80.3	14,803	1,671	17,764	2,005	29,607	3,342
K713_0890 MT40	89.00	22785/256	2,900	2,600	3,500	10/5	11.3	715	80.8	14,803	1,671	17,764	2,005	29,607	3,342
K713_0990 MT30	98.54	100905/1024	2,900	2,600	3,800	10/5	7.2	713	80.5	16,394	1,851	19,672	2,221	32,787	3,701
K713_0990 MT40	98.54	100905/1024	2,900	2,600	3,500	10/5	11.2	716	80.8	16,394	1,851	19,672	2,221	32,787	3,701

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



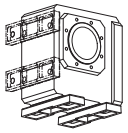
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K714 with MT TriAdapt® Motor Adapter															**Noise Level ≤ 59 dB(A) [4]**
K714_0890 MT30	89.06	227997/2560	2,900	2,600	3,800	10/6	7.3	712	80.3	21,259	2,400	23,031	2,600	30,792	3,476
K714_0990 MT30	98.60	1009701/10240	2,900	2,600	3,800	10/6	7.2	713	80.5	21,259	2,400	23,031	2,600	34,091	3,849
K714_1130 MT20	113.2	72471/640	2,900	2,600	3,800	10/6	1.9	712	80.3	11,715	1,323	11,715	1,323	14,644	1,653
K714_1150 MT30	114.7	117453/1024	2,900	2,600	3,800	10/6	7.0	714	80.7	21,259	2,400	23,031	2,600	37,770	4,264
K714_1250 MT20	125.4	320943/2560	2,900	2,600	3,800	10/6	1.9	713	80.5	12,970	1,464	12,970	1,464	16,213	1,830
K714_1270 MT30	127.0	520149/4096	2,900	2,600	3,800	10/6	7.0	715	80.8	21,259	2,400	23,031	2,600	41,817	4,721
K714_1370 MT20	137.0	5481/40	2,900	2,600	3,800	10/6	1.8	714	80.6	13,615	1,537	13,615	1,537	17,018	1,921
K714_1390 MT30	138.8	8883/64	2,900	2,600	3,800	10/6	6.9	716	80.8	21,259	2,400	23,031	2,600	42,518	4,800
K714_1520 MT20	151.7	24273/160	2,900	2,600	3,800	10/6	1.8	715	80.7	15,073	1,702	15,073	1,702	18,842	2,127
K714_1540 MT30	153.7	39339/256	2,900	2,600	3,800	10/6	6.8	716	80.9	21,259	2,400	23,031	2,600	42,518	4,800
K714_1740 MT20	174.2	72471/416	2,900	2,600	3,800	10/6	1.6	716	80.8	16,434	1,855	16,434	1,855	20,542	2,319
K714_1760 MT30	176.5	587265/3328	2,900	2,600	3,800	10/6	6.7	717	80.9	21,259	2,400	23,031	2,600	42,518	4,800
K714_1930 MT20	192.9	320943/1664	2,900	2,600	3,800	10/6	1.6	716	80.9	18,194	2,054	18,194	2,054	22,743	2,567
K714_1950 MT30	195.4	2600745/13312	2,900	2,600	3,800	10/6	6.7	717	81.0	21,259	2,400	23,031	2,600	42,518	4,800
K714_2260 MT20	226.5	72471/320	2,900	2,600	3,800	10/6	1.5	717	81.0	17,798	2,009	20,216	2,282	25,271	2,853
K714_2290 MT30	229.4	117453/512	2,900	2,600	3,800	10/6	6.6	718	81.0	21,259	2,400	23,031	2,600	42,518	4,800
K714_2510 MT20	250.7	320943/1280	2,900	2,600	3,800	10/6	1.5	717	81.0	19,705	2,225	22,382	2,527	27,978	3,159
K714_2540 MT30	254.0	520149/2048	2,900	2,600	3,800	10/6	6.6	718	81.1	21,259	2,400	23,031	2,600	42,518	4,800
K714_2750 MT20	275.3	44051/160	2,900	2,600	3,800	10/6	1.5	718	81.0	18,362	2,073	23,031	2,600	29,352	3,314
K714_3050 MT20	304.8	195083/640	2,900	2,600	3,800	10/6	1.5	718	81.0	20,330	2,295	23,031	2,600	32,497	3,669
K714_3440 MT20	344.1	44051/128	2,900	2,600	3,800	10/6	1.4	718	81.1	14,803	1,671	17,764	2,005	29,607	3,342
K714_3810 MT20	381.0	195083/512	2,900	2,600	3,800	10/6	1.4	718	81.1	16,394	1,851	19,672	2,221	32,787	3,701
K813 with MT TriAdapt® Motor Adapter Continued Next Page															**Noise Level ≤ 65 dB(A) [4]**
K813_0074 MT30	7.445	3127/420	1,600	1,500	2,600	10/5	161.2	350	39.5	5,989	676	6,588	744	11,979	1,352
K813_0074 MT40	7.445	3127/420	1,600	1,500	2,600	10/5	165.2	564	63.7	10,163	1,147	10,163	1,147	12,704	1,434
K813_0074 MT50	7.445	3127/420	1,600	1,500	2,600	10/5	175.2	900	101.6	19,420	2,192	19,420	2,192	24,275	2,740
K813_0082 MT30	8.243	96937/11760	1,600	1,500	2,600	10/5	142.9	404	45.6	6,631	749	7,294	823	13,263	1,497
K813_0082 MT40	8.243	96937/11760	1,600	1,500	2,600	10/5	146.9	628	70.8	11,252	1,270	11,252	1,270	14,065	1,588
K813_0082 MT50	8.243	96937/11760	1,600	1,500	2,600	10/5	156.9	949	107.2	21,242	2,398	21,502	2,427	26,877	3,034
K813_0093 MT30	9.284	11977/1290	1,600	1,500	2,600	10/5	115.5	471	53.2	7,469	843	8,216	927	14,938	1,686
K813_0093 MT40	9.284	11977/1290	1,600	1,500	2,600	10/5	119.5	702	79.2	12,266	1,385	12,266	1,385	15,333	1,731
K813_0093 MT50	9.284	11977/1290	1,600	1,500	2,600	10/5	129.5	1,001	113.0	22,101	2,495	23,439	2,646	29,299	3,308
K813_0105 MT30	10.28	53041/5160	1,600	1,500	2,600	10/5	103.7	533	60.1	8,269	934	9,096	1,027	16,539	1,867
K813_0105 MT40	10.28	53041/5160	1,600	1,500	2,600	10/5	107.7	763	86.2	13,581	1,533	13,581	1,533	16,976	1,916
K813_0105 MT50	10.28	53041/5160	1,600	1,500	2,600	10/5	117.7	1,039	117.3	22,864	2,581	25,951	2,930	32,439	3,662
K813_0120 MT30	11.91	6608/555	1,900	1,800	2,900	10/5	80.6	624	70.4	9,578	1,081	10,536	1,189	18,938	2,138
K813_0120 MT40	11.91	6608/555	1,900	1,800	2,900	10/5	84.6	848	95.7	15,150	1,710	15,150	1,710	18,938	2,138
K813_0120 MT50	11.91	6608/555	1,900	1,800	2,900	10/5	94.6	1,086	122.6	24,011	2,711	28,950	3,268	36,188	4,085

Motor Shaft

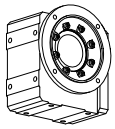
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

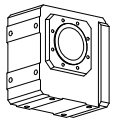
N Foot Mounted



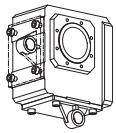
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	$T_{2N \le 2000\ RPM}$ in.lbs.	T_{2N} Nm	T_{2B} in.lbs.	T_{2B} Nm	T_{2PEAK} in.lbs.	T_{2PEAK} Nm
K813 with MT TriAdapt® Motor Adapter Continued Next Page														**Noise Level ≤ 65 dB(A)** [4]	
K813_0130 MT30	13.18	7316/555	1,900	1,800	2,900	10/5	73.4	687	77.6	10,605	1,197	11,665	1,317	20,967	2,367
K813_0130 MT40	13.18	7316/555	1,900	1,800	2,900	10/5	77.4	901	101.8	16,774	1,894	16,774	1,894	20,967	2,367
K813_0130 MT50	13.18	7316/555	1,900	1,800	2,900	10/5	87.4	1,113	125.7	24,840	2,804	32,053	3,619	40,066	4,523
K813_0150 MT30	14.84	9499/640	1,900	1,800	2,900	10/5	59.2	760	85.8	11,940	1,348	13,134	1,483	22,766	2,570
K813_0150 MT40	14.84	9499/640	1,900	1,800	2,900	10/5	63.2	958	108.2	18,213	2,056	18,213	2,056	22,766	2,570
K813_0150 MT50	14.84	9499/640	1,900	1,800	2,900	10/5	73.2	1,140	128.7	25,842	2,917	34,803	3,929	43,504	4,911
K813_0165 MT30	16.43	42067/2560	1,900	1,800	2,900	10/5	54.5	819	92.5	13,219	1,492	14,541	1,642	25,205	2,845
K813_0165 MT40	16.43	42067/2560	1,900	1,800	2,900	10/5	58.5	1,001	113.1	20,164	2,276	20,164	2,276	25,205	2,845
K813_0165 MT50	16.43	42067/2560	1,900	1,800	2,900	10/5	68.5	1,159	130.9	26,734	3,018	38,531	4,350	48,164	5,437
K813_0175 MT30	17.33	30149/1740	2,300	2,100	3,300	10/5	48.4	849	95.8	13,939	1,574	15,333	1,731	25,932	2,928
K813_0175 MT40	17.33	30149/1740	2,300	2,100	3,300	10/5	52.4	1,022	115.4	20,746	2,342	20,746	2,342	25,932	2,928
K813_0175 MT50	17.33	30149/1740	2,300	2,100	3,000	10/5	62.4	1,168	131.8	27,211	3,072	39,642	4,475	49,553	5,594
K813_0190 MT30	19.18	133517/6960	2,300	2,100	3,300	10/5	45.1	902	101.8	15,432	1,742	16,976	1,916	28,710	3,241
K813_0190 MT40	19.18	133517/6960	2,300	2,100	3,300	10/5	49.1	1,058	119.4	22,968	2,593	22,968	2,593	28,710	3,241
K813_0190 MT50	19.18	133517/6960	2,300	2,100	3,000	10/5	59.1	1,183	133.5	28,149	3,178	41,190	4,650	54,861	6,193
K813_0230 MT30	23.04	31801/1380	2,300	2,100	3,300	10/5	33.8	987	111.4	18,539	2,093	20,392	2,302	32,546	3,674
K813_0230 MT40	23.04	31801/1380	2,300	2,100	3,300	10/5	37.8	1,111	125.4	26,037	2,939	26,037	2,939	32,546	3,674
K813_0230 MT50	23.04	31801/1380	2,300	2,100	3,000	10/5	47.8	1,203	135.8	29,924	3,378	41,190	4,650	62,192	7,021
K813_0260 MT30	25.51	140833/5520	2,300	2,100	3,300	10/5	31.9	1,027	115.9	20,525	2,317	22,577	2,549	36,033	4,068
K813_0260 MT40	25.51	140833/5520	2,300	2,100	3,300	10/5	35.9	1,134	128.1	28,827	3,254	28,827	3,254	36,033	4,068
K813_0260 MT50	25.51	140833/5520	2,300	2,100	3,000	10/5	45.9	1,212	136.8	30,956	3,495	41,190	4,650	68,856	7,773
K813_0290 MT30	29.25	7021/240	2,800	2,500	3,600	10/5	24.9	1,073	121.2	20,833	2,352	25,888	2,923	39,618	4,473
K813_0290 MT40	29.25	7021/240	2,800	2,500	3,500	10/5	28.9	1,161	131.0	31,694	3,578	31,694	3,578	39,618	4,473
K813_0290 MT50	29.25	7021/240	2,500	2,500	3,000	10/5	38.9	1,221	137.9	32,401	3,658	41,190	4,650	74,407	8,400
K813_0320 MT30	32.39	31093/960	2,800	2,500	3,600	10/5	23.7	1,102	124.4	23,065	2,604	28,662	3,236	43,863	4,952
K813_0320 MT40	32.39	31093/960	2,800	2,500	3,500	10/5	27.7	1,176	132.8	33,519	3,784	35,091	3,961	43,863	4,952
K813_0320 MT50	32.39	31093/960	2,500	2,500	3,000	10/5	37.7	1,227	138.5	33,519	3,784	41,190	4,650	74,407	8,400
K813_0360 MT30	36.14	2891/80	2,800	2,500	3,600	10/5	19.4	1,129	127.4	21,177	2,391	31,980	3,610	46,613	5,262
K813_0360 MT40	36.14	2891/80	2,800	2,500	3,500	10/5	23.4	1,191	134.4	34,766	3,925	37,290	4,210	46,613	5,262
K813_0360 MT50	36.14	2891/80	2,500	2,500	3,000	10/5	33.4	1,232	139.1	34,766	3,925	41,190	4,650	74,407	8,400
K813_0400 MT30	40.01	12803/320	2,800	2,500	3,600	10/5	18.6	1,150	129.8	23,446	2,647	35,405	3,997	51,606	5,826
K813_0400 MT40	40.01	12803/320	2,800	2,500	3,500	10/5	22.6	1,201	135.6	35,965	4,060	41,190	4,650	51,606	5,826
K813_0400 MT50	40.01	12803/320	2,500	2,500	3,000	10/5	32.6	1,236	139.5	35,965	4,060	41,190	4,650	74,407	8,400
K813_0440 MT30	44.25	177/4	2,800	2,500	3,600	10/5	15.5	1,167	131.8	22,059	2,490	39,158	4,421	54,814	6,188
K813_0440 MT40	44.25	177/4	2,800	2,500	3,500	10/5	19.5	1,210	136.6	37,194	4,199	41,190	4,650	54,814	6,188
K813_0440 MT50	44.25	177/4	2,500	2,500	3,000	10/5	29.5	1,239	139.8	37,194	4,199	41,190	4,650	54,814	6,188
K813_0490 MT30	48.99	5487/112	2,800	2,500	3,600	10/5	15.0	1,182	133.4	24,422	2,757	41,190	4,650	60,687	6,851
K813_0490 MT40	48.99	5487/112	2,800	2,500	3,500	10/5	19.0	1,218	137.5	37,204	4,200	41,190	4,650	60,687	6,851
K813_0490 MT50	48.99	5487/112	2,500	2,500	3,000	10/5	29.0	1,241	140.1	37,204	4,200	41,190	4,650	60,687	6,851
K813_0590 MT30	59.08	42539/720	2,800	2,500	3,600	10/5	11.8	1,203	135.8	22,721	2,565	41,190	4,650	68,590	7,743
K813_0590 MT40	59.08	42539/720	2,800	2,500	3,500	10/5	15.8	1,228	138.7	37,204	4,200	41,190	4,650	68,590	7,743
K813_0590 MT50	59.08	42539/720	2,500	2,500	3,000	10/5	25.8	1,245	140.5	37,204	4,200	41,190	4,650	68,590	7,743

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



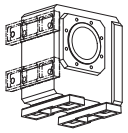
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K813 with MT TriAdapt® Motor Adapter Continued														**Noise Level ≤ 65 dB(A) [4]**	
K813_0650 MT30	65.41	188387/2880	2,800	2,500	3,600	10/5	11.5	1,212	136.8	25,155	2,840	41,190	4,650	74,407	8,400
K813_0650 MT40	65.41	188387/2880	2,800	2,500	3,500	10/5	15.5	1,233	139.2	37,204	4,200	41,190	4,650	74,407	8,400
K813_0650 MT50	65.41	188387/2880	2,500	2,500	3,000	10/5	25.5	1,246	140.7	37,204	4,200	41,190	4,650	74,407	8,400
K813_0720 MT30	71.70	10325/144	2,800	2,500	3,600	10/5	10.1	1,218	137.5	23,288	2,629	38,322	4,326	63,869	7,210
K813_0720 MT40	71.70	10325/144	2,800	2,500	3,500	10/5	14.1	1,236	139.5	31,935	3,605	38,322	4,326	63,869	7,210
K813_0720 MT50	71.70	10325/144	2,500	2,500	3,000	10/5	24.1	1,247	140.8	31,935	3,605	38,322	4,326	63,869	7,210
K813_0790 MT30	79.38	45725/576	2,800	2,500	3,600	10/5	9.9	1,225	138.2	25,783	2,911	41,190	4,650	70,731	7,985
K813_0790 MT40	79.38	45725/576	2,800	2,500	3,500	10/5	13.9	1,239	139.9	35,365	3,992	41,190	4,650	70,731	7,985
K813_0790 MT50	79.38	45725/576	2,500	2,500	3,000	10/5	23.9	1,248	140.9	35,365	3,992	41,190	4,650	70,731	7,985
K813_0880 MT30	87.76	7021/80	2,800	2,500	3,600	10/5	8.8	1,229	138.8	23,753	2,682	28,945	3,268	36,182	4,085
K813_0880 MT40	87.76	7021/80	2,800	2,500	3,500	10/5	12.8	1,241	140.1	24,838	2,804	28,945	3,268	36,182	4,085
K813_0970 MT30	97.17	31093/320	2,800	2,500	3,600	10/5	8.7	1,234	139.3	26,298	2,969	32,047	3,618	40,058	4,522
K813_0970 MT40	97.17	31093/320	2,800	2,500	3,500	10/5	12.7	1,243	140.4	27,506	3,105	32,047	3,618	40,058	4,522
K814 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 65 dB(A) [4]**	
K814_0670 MT40	66.83	38763/580	2,800	2,500	3,500	10/6	14.5	1,234	139.3	37,204	4,200	39,644	4,476	49,555	5,594
K814_0740 MT40	73.99	1201653/16240	2,800	2,500	3,500	10/6	14.3	1,237	139.6	37,204	4,200	41,190	4,650	54,864	6,194
K814_0890 MT40	88.89	40887/460	2,800	2,500	3,500	10/6	13.5	1,242	140.2	37,204	4,200	41,190	4,650	62,195	7,021
K814_0980 MT40	98.41	181071/1840	2,800	2,500	3,500	10/6	13.4	1,244	140.4	37,204	4,200	41,190	4,650	68,859	7,774
K814_1130 MT40	112.8	9027/80	2,800	2,500	3,500	10/6	12.9	1,246	140.6	37,204	4,200	41,190	4,650	74,407	8,400
K814_1150 MT30	114.6	329987/2880	2,800	2,500	3,600	10/6	7.7	1,239	139.8	29,076	3,282	31,692	3,578	39,615	4,472
K814_1250 MT40	124.9	279837/2240	2,800	2,500	3,500	10/6	12.8	1,247	140.8	37,204	4,200	41,190	4,650	74,407	8,400
K814_1270 MT30	126.9	1461371/11520	2,800	2,500	3,600	10/6	7.7	1,241	140.1	32,191	3,634	35,087	3,961	43,859	4,951
K814_1390 MT40	139.4	11151/80	2,800	2,500	3,500	10/6	12.5	1,248	140.9	37,204	4,200	41,190	4,650	74,407	8,400
K814_1420 MT30	141.5	135877/960	2,800	2,500	3,600	10/6	7.4	1,243	140.4	30,138	3,402	37,287	4,209	46,608	5,262
K814_1540 MT40	154.3	49383/320	2,800	2,500	3,500	10/6	12.5	1,249	141.0	37,204	4,200	41,190	4,650	74,407	8,400
K814_1570 MT30	156.7	601741/3840	2,800	2,500	3,600	10/6	7.3	1,245	140.6	33,367	3,767	41,190	4,650	51,602	5,825
K814_1710 MT40	170.7	4779/28	2,800	2,500	3,500	10/6	12.3	1,249	141.0	37,204	4,200	41,190	4,650	54,816	6,188
K814_1730 MT30	173.3	2773/16	2,800	2,500	3,600	10/6	7.1	1,246	140.7	31,904	3,602	41,190	4,650	54,810	6,188
K814_1890 MT40	189.0	148149/784	2,800	2,500	3,500	10/6	12.2	1,250	141.1	37,204	4,200	41,190	4,650	60,690	6,851
K814_1920 MT30	191.9	85963/448	2,800	2,500	3,600	10/6	7.1	1,247	140.8	35,323	3,988	41,190	4,650	60,682	6,851
K814_2280 MT40	227.9	18231/80	2,800	2,500	3,500	10/6	12.0	1,251	141.2	37,204	4,200	41,190	4,650	68,593	7,744
K814_2310 MT30	231.4	1999333/8640	2,800	2,500	3,600	10/6	6.9	1,249	141.0	33,726	3,807	41,190	4,650	68,584	7,743
K814_2520 MT40	252.3	565161/2240	2,800	2,500	3,500	10/6	12.0	1,251	141.2	37,204	4,200	41,190	4,650	74,407	8,400
K814_2560 MT30	256.2	8854189/34560	2,800	2,500	3,600	10/6	6.9	1,250	141.1	37,204	4,200	41,190	4,650	74,407	8,400
K814_2770 MT40	276.6	4425/16	2,800	2,500	3,500	10/6	11.9	1,251	141.2	31,935	3,605	38,322	4,326	63,869	7,210
K814_2810 MT30	280.8	485275/1728	2,800	2,500	3,600	10/6	6.8	1,250	141.1	31,935	3,605	38,322	4,326	63,869	7,210
K814_3060 MT40	306.2	137175/448	2,800	2,500	3,500	10/6	11.9	1,251	141.3	35,365	3,992	41,190	4,650	70,731	7,985
K814_3110 MT30	310.9	2149075/6912	2,800	2,500	3,600	10/6	6.8	1,250	141.2	35,365	3,992	41,190	4,650	70,731	7,985

Motor Shaft

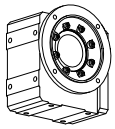
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

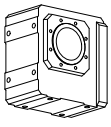
N Foot Mounted



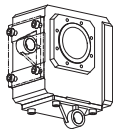
F Round Flange



G Tapped Holes



GD Torque Arm Bracket



These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data

Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	$kgcm^2$	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K913 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 65 dB(A)** [4]	
K913_0079 MT50	7.934	54839/6912	1,500	1,500	2,500	10/5	351.2	1,232	139.1	21,757	2,456	21,757	2,456	27,197	3,070
K913_0100 MT50	10.12	119133/11776	1,500	1,500	2,500	10/5	248.9	1,417	159.9	26,753	3,020	26,753	3,020	33,441	3,775
K913_0125 MT50	12.53	73749/5888	1,800	1,800	2,800	10/5	186.8	1,545	174.4	32,159	3,631	32,159	3,631	40,199	4,538
K913_0160 MT50	15.91	13237/832	1,800	1,800	2,800	10/5	135.0	1,652	186.5	39,199	4,425	39,199	4,425	48,999	5,532
K913_0190 MT50	19.06	305/16	2,200	2,100	3,000	10/5	108.9	1,711	193.2	45,504	5,137	45,504	5,137	56,880	6,421
K913_0240 MT40	23.94	88877/3712	2,200	2,100	3,100	10/5	73.0	1,585	178.9	28,667	3,236	28,667	3,236	35,834	4,045
K913_0240 MT50	23.94	88877/3712	2,200	2,100	3,000	10/5	83.0	1,764	199.1	54,779	6,184	54,779	6,184	68,474	7,730
K913_0320 MT40	32.12	47275/1472	2,600	2,500	3,400	10/5	50.5	1,697	191.6	36,287	4,097	36,287	4,097	45,359	5,121
K913_0320 MT50	32.12	47275/1472	2,500	2,500	3,000	10/5	60.5	1,806	203.9	60,669	6,849	68,207	7,700	86,676	9,785
K913_0380 MT40	38.04	194773/5120	2,600	2,500	3,400	10/5	40.9	1,742	196.6	41,507	4,686	41,507	4,686	51,884	5,857
K913_0380 MT50	38.04	194773/5120	2,500	2,500	3,000	10/5	50.9	1,822	205.7	62,006	7,000	68,207	7,700	99,144	11,193
K913_0490 MT40	48.94	100223/2048	2,600	2,500	3,400	10/5	30.6	1,788	201.8	50,266	5,675	50,497	5,701	63,122	7,126
K913_0490 MT50	48.94	100223/2048	2,500	2,500	3,000	10/5	40.6	1,838	207.5	62,006	7,000	68,207	7,700	120,618	13,617
K913_0630 MT40	63.07	209901/3328	2,600	2,500	3,400	10/5	23.5	1,817	205.1	51,864	5,855	61,561	6,950	76,952	8,687
K913_0630 MT50	63.07	209901/3328	2,500	2,500	3,000	10/5	33.5	1,848	208.6	62,006	7,000	68,207	7,700	124,012	14,000
K913_0750 MT40	75.00	62403/832	2,600	2,500	3,400	10/5	19.9	1,830	206.6	53,248	6,011	68,207	7,700	88,210	9,958
K913_0750 MT50	75.00	62403/832	2,500	2,500	3,000	10/5	29.9	1,852	209.1	62,006	7,000	68,207	7,700	88,210	9,958
K913_0950 MT40	95.41	293105/3072	2,600	2,500	3,400	10/5	16.4	1,843	208.0	47,620	5,376	57,144	6,451	95,240	10,752
K913_0950 MT50	95.41	293105/3072	2,500	2,500	3,000	10/5	26.4	1,856	209.6	47,620	5,376	57,144	6,451	95,240	10,752
K914 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 65 dB(A)** [4]	
K914_0920 MT40	92.35	2399679/25984	2,600	2,500	3,400	10/5	15.9	1,841	207.9	54,781	6,184	54,781	6,184	68,477	7,730
K914_0940 MT30	93.78	4177219/44544	2,600	2,500	3,400	10/5	10.6	1,819	205.3	25,351	2,862	28,664	3,236	35,831	4,045
K914_1240 MT40	123.9	1276425/10304	2,600	2,500	3,400	10/5	14.3	1,851	208.9	60,960	6,882	68,207	7,700	86,680	9,785
K914_1260 MT30	125.8	2221925/17664	2,600	2,500	3,400	10/5	9.1	1,838	207.5	34,011	3,840	36,284	4,096	45,355	5,120
K914_1470 MT40	146.7	5258871/35840	2,600	2,500	3,400	10/5	13.7	1,854	209.3	62,006	7,000	68,207	7,700	99,147	11,193
K914_1490 MT30	149.0	9154331/61440	2,600	2,500	3,400	10/5	8.5	1,845	208.3	38,782	4,378	41,503	4,685	51,879	5,857
K914_1890 MT40	188.8	2706021/14336	2,600	2,500	3,400	10/5	13.0	1,858	209.7	62,006	7,000	68,207	7,700	120,623	13,617
K914_1920 MT30	191.7	4710481/24576	2,600	2,500	3,400	10/5	7.8	1,852	209.1	40,812	4,607	50,493	5,700	63,116	7,125
K914_2430 MT40	243.3	5667327/23296	2,600	2,500	3,400	10/5	12.5	1,860	210.0	62,006	7,000	68,207	7,700	124,012	14,000
K914_2470 MT30	247.0	3288449/13312	2,600	2,500	3,400	10/5	7.4	1,856	209.6	43,056	4,861	61,556	6,949	76,945	8,687
K914_2940 MT30	293.8	977647/3328	2,600	2,500	3,400	10/5	7.1	1,858	209.8	44,860	5,064	68,207	7,700	88,202	9,957
K914_3740 MT30	373.7	13775935/36864	2,600	2,500	3,400	10/5	6.9	1,860	210.0	46,783	5,281	57,144	6,451	95,240	10,752

[1] Backlash shown "STANDARD/REDUCED".

[2] Maximum torque for continuous input RPM - horizontal output position.

[3] Maximum momentary torque for emergency stops or heavy shock load. Admissible stops per life of reducer = 1,000 stops maximum.

[4] dB(A)Measured at 1 meter distance with 3000 RPM input

Index of Symbols

- i ... Exact Ratio = Exact Tooth Count
- J_1 ... Reducer Inertia
- C ... ServoCool
- C_2 ... Torsional Stiffness
- n_{1DBH} ... Maximum Continuous Input RPM Horizontal Mounting - EL1, 2, 5, 6
- n_{1DBV} ... Maximum Continuous Input RPM Vertical Position - EL3 and EL4
- n_{1ZB} ... Maximum Cyclic Input RPM
- T_{2N} ... Nominal Torque @ 2000 RPM Input
- $T_{2N(n1DBH)}$ ... Rated Torque @ Maximum Continuous Input RPM Horizontal Mounting - EL1, EL2, EL5, EL6
- T_{2B} ... Acceleration Torque Maximum
- T_{2PEAK} ... Peak Torque

See web site for drawings.

"K" Series–Right Angle Helical/Bevel ServoFit® Modular System Selection Data



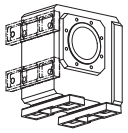
Part Number	Reducer Ratio i		Input RPM Maximum Continuous		Input RPM Maximum Cyclic	Backlash arcmins	Input Inertia	Torsional Stiffness per arcmin		Output Torque Nominal [2]		Output Torque Acceleration		Output Torque Peak [3]	
										$T_{2N \le 2000\ RPM}$		T_{2B}		T_{2PEAK}	
	Nom.	Exact	n_{1DBH}	n_{1DBV}	n_{1ZB}	$\Delta\varphi$ [1]	J_1 kgcm²	C_2 in.lbs.	C_2 Nm	in.lbs.	Nm	in.lbs.	Nm	in.lbs.	Nm
K1013 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 65 dB(A) [4]**	
K1013_0079 MT50	7.9	47089/5928	1,500	1,500	2,200	10/5	816.2	1,934	218.4	22,197	2,506	24,417	2,756	35,650	4,025
K1013_0100 MT50	10.0	2077/208	1,500	1,500	2,200	10/5	578.1	2,403	271.2	27,906	3,150	30,697	3,465	44,819	5,060
K1013_0125 MT50	12.5	71393/5720	1,800	1,800	2,500	10/5	411.7	2,827	319.2	34,878	3,938	38,366	4,331	56,017	6,324
K1013_0160 MT50	15.9	37975/2392	1,800	1,800	2,500	10/5	293.3	3,213	362.7	44,366	5,009	48,802	5,509	71,254	8,044
K1013_0190 MT50	18.8	144305/7696	2,100	2,000	2,800	10/5	234.2	3,427	386.9	52,400	5,916	57,640	6,507	84,158	9,501
K1013_0240 MT50	23.8	4949/208	2,100	2,000	2,800	10/5	169.2	3,661	413.3	66,490	7,506	73,139	8,257	106,787	12,055
K1013_0320 MT50	31.5	144305/4576	2,500	2,300	3,000	10/5	117.3	3,847	434.2	71,197	8,038	71,197	8,038	88,996	10,047
K1013_0390 MT50	38.6	8029/208	2,500	2,300	3,000	10/5	90.1	3,934	444.1	83,593	9,437	83,593	9,437	104,491	11,796
K1013_0490 MT50	48.5	171647/3536	2,500	2,300	3,000	10/5	68.2	4,001	451.7	100,084	11,299	100,084	11,299	125,105	14,123
K1013_0620 MT50	61.6	12803/208	2,500	2,300	3,000	10/5	52.2	4,046	456.8	105,349	11,893	116,926	13,200	150,559	16,997
K1013_0750 MT50	75.3	101773/1352	2,500	2,300	3,000	10/5	42.6	4,071	459.6	100,417	11,336	116,926	13,200	175,501	19,813
K1013_0940 MT50	94.3	235445/2496	2,500	2,300	3,000	10/5	35.1	4,090	461.7	82,844	9,352	87,608	9,890	109,510	12,363
K1014 with MT TriAdapt® Motor Adapter														**Noise Level ≤ 65 dB(A) [4]**	
K1014_0930 MT50	93.3	252399/2704	2,500	2,300	3,000	10/5	32.7	4,089	461.6	95,723	10,806	113,260	12,786	141,576	15,983
K1014_1220 MT40	121.6	556605/4576	2,500	2,300	3,200	10/5	18.4	4,062	458.5	70,302	7,937	71,200	8,038	89,000	10,047
K1014_1240 MT50	123.7	7359555/59488	2,500	2,300	3,000	10/5	29.3	4,104	463.3	106,296	12,000	116,926	13,200	177,477	20,036
K1014_1490 MT40	148.9	30969/208	2,500	2,300	3,200	10/5	16.5	4,082	460.8	74,065	8,361	83,596	9,437	104,495	11,797
K1014_1510 MT50	151.4	409479/2704	2,500	2,300	3,000	10/5	27.5	4,110	464.0	106,296	12,000	116,926	13,200	208,376	23,524
K1014_1870 MT40	187.2	662067/3536	2,500	2,300	3,200	10/5	15.1	4,097	462.5	78,043	8,811	100,087	11,299	125,108	14,124
K1014_1900 MT50	190.4	514941/2704	2,500	2,300	3,000	10/5	26.1	4,115	464.5	106,296	12,000	116,926	13,200	212,592	24,000
K1014_2370 MT40	237.4	49383/208	2,500	2,300	3,200	10/5	14.0	4,106	463.6	81,994	9,256	116,926	13,200	150,564	16,998
K1014_2900 MT40	290.4	392553/1352	2,500	2,300	3,200	10/5	13.3	4,112	464.2	84,369	9,525	116,926	13,200	175,508	19,813

Motor Shaft

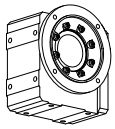
Motor Adapter	Max. Shaft Diameter
MT10	19
MT20	24
MT30	38
MT40	48
MT50	60

Housing Styles

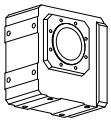
N Foot Mounted



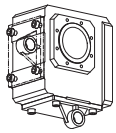
F Round Flange



G Tapped Holes

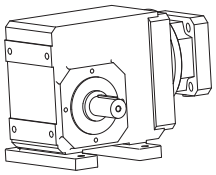


GD Torque Arm Bracket

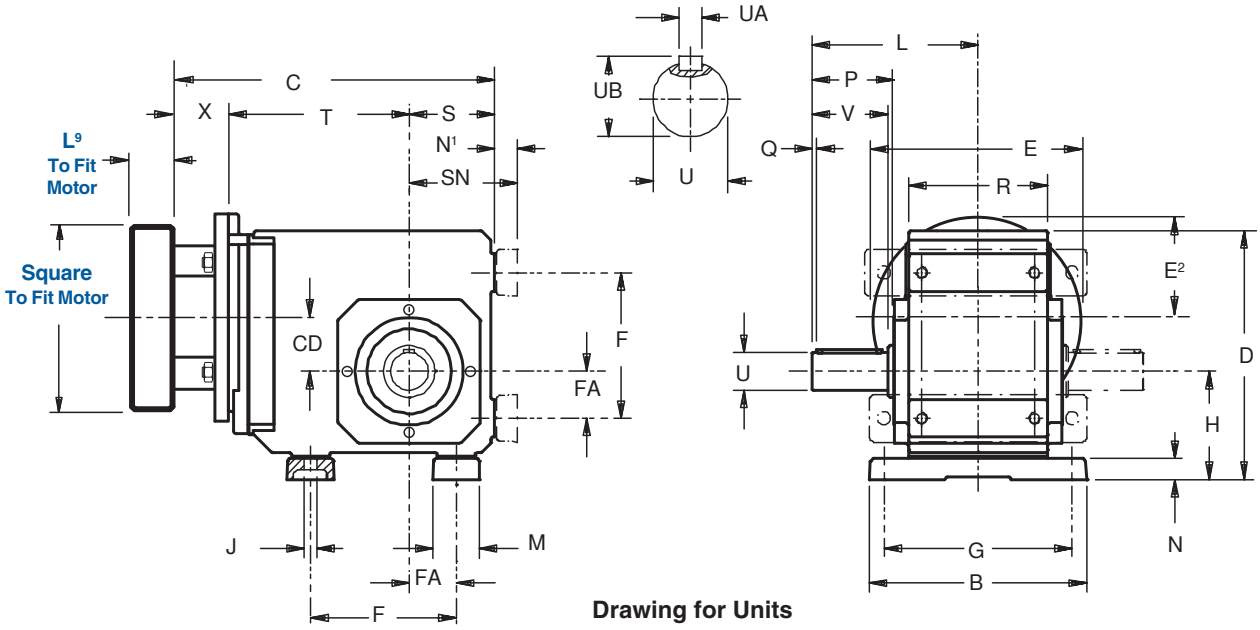


These Housing Styles are available as Hollow (A), Bushing (W), or Solid (V) Output.

See Page 122 for required ordering information and part number example.



ServoFit® "K" Series–Helical/Bevel Foot Mount – "N" Housing Shaft Output – Dimensional Data



Drawing for Units
K102VN — K403VN

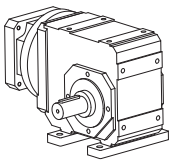
Table No. 1 **"K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style**

Base Module	B	D	F	G	H	J	L	M	N	O	P	Q	R	S	V	Z¹	BO	FA	N¹	SN
K102	5.51	6.81	3.54[1)]	4.53	2.95	.35	4.53	1.18	.51	–	2.32	.16	3.54	2.36	1.97	–	–	1.18	.59	2.95
K202/203	7.28	8.39	4.53	6.10	3.46	.43	5.31	1.57	.79	–	2.56	.16	4.53	2.56	2.36	–	–	1.38	.91	3.46
K302/303	7.87	9.29	5.12	6.69	3.86	.43	5.59	1.77	.79	–	2.60	.16	5.12	2.95	2.36	–	–	1.57	.91	3.86
K402/403	9.06	10.43	6.10	7.87	4.53	.55	6.54	1.97	.87	–	3.39	.16	5.83	3.54	2.76	–	–	1.97	.98	4.53
K513/514	9.45	11.42	5.51	7.87	7.48	.71	8.74	2.36	1.06	5.10	3.90	.16	6.30	3.94	3.54	5.98	7.28	1.57	1.18	5.12
K613/614	9.84	13.39	6.30	8.27	8.66	.71	9.29	2.56	1.06	5.35	4.31	.16	6.61	4.72	3.94	6.77	7.87	1.97	1.18	5.91
K713/714	11.42	14.96	7.09	9.45	9.84	.87	10.91	2.76	1.38	6.46	5.14	.16	7.48	4.92	4.72	7.52	8.90	2.17	1.50	6.42
K813/814	14.17	17.91	9.45	11.81	12.20	1.02	12.83	3.35	1.61	7.28	5.94	.20	9.25	5.71	5.51	8.11	11.10	2.95	1.77	7.48
K913/914	16.93	21.46	11.02	14.17	14.37	1.30	15.16	3.74	1.81	8.66	7.13	.31	11.22	7.09	6.69	9.84	12.99	3.74	1.97	9.06
K1013/1014	15.75	23.27	13.78	12.99	14.76	1.54	16.46	4.72	1.77	9.45	8.66	.59	15.75	–	8.27	12.01	14.02	4.53	1.77	8.86

[1)] Mounting holes are also located on Side 1 of the K1 unit ONLY.

Table No. 2 **Metric output available on request.**

	Standard Shaft — inches			Optional Shaft —mm		
Base Module	U	UA—Key	UB	U	UA—Key	UB
K102	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	M8 ×7×40	28
K202/203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	M8 ×7×50	33
K302/303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	M8 ×7×50	33
K402/403	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51	40_{k6}	M12 ×8×70	43
K513/514	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	45_{k6}	M14 ×9×80	48.5
K613/614	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	50_{k6}	M14 ×9×90	53.5
K713/714	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	60_{k6}	M18 ×11×110	64
K813/814	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	70_{m6}	M20 ×12×125	74.5
K913/914	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01	90_{m6}	M25 ×14×140	95
K1013/1014	4.375	$1 \times 1 \times 7^1/_8$	4.82	110_{m6}	M28 ×16×180	116



K1 Housing with tapped holes on Side 1, Side 2, and Side 5. Shown EL1 with mounting feet on Side 1.

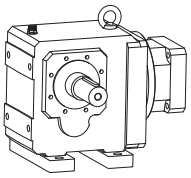
Part No. Example

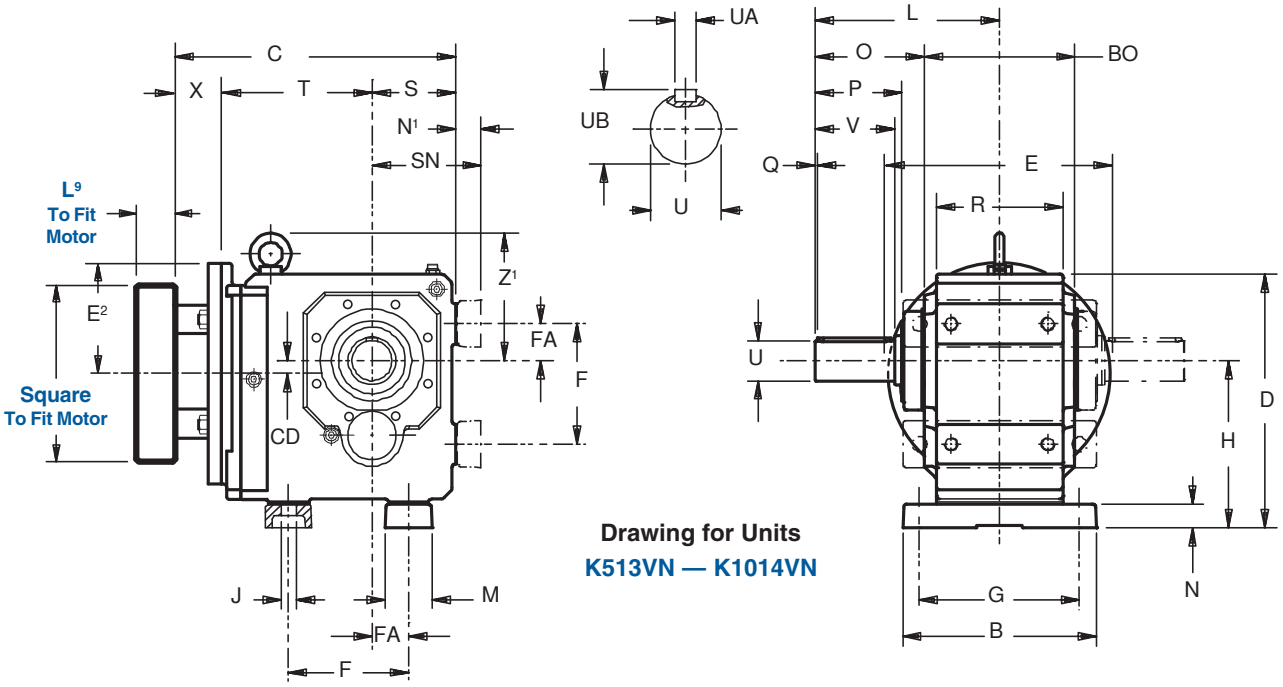
Foot Mounting with TriAdapt® Motor Adapter

K303VN0650 MT20

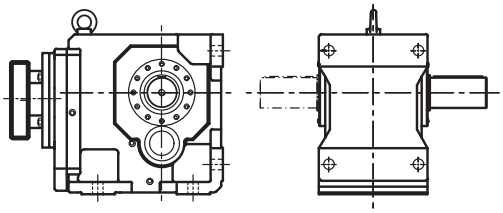
For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

ServoFit® "K" Series–Helical/Bevel
Foot Mount – "N" Housing
Shaft Output – Dimensional Data





Drawing for Units
K513VN — K1014VN



Mounting feet are integral on the K10 housing.

Table No. 3 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D⁶ Max. 1)		Motor Plate 2) Thickness L⁹ Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E²	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

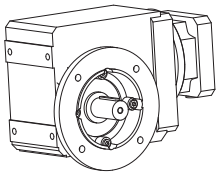
1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L⁹) will vary with motor shaft length but will not be less than shown.

Table No. 4

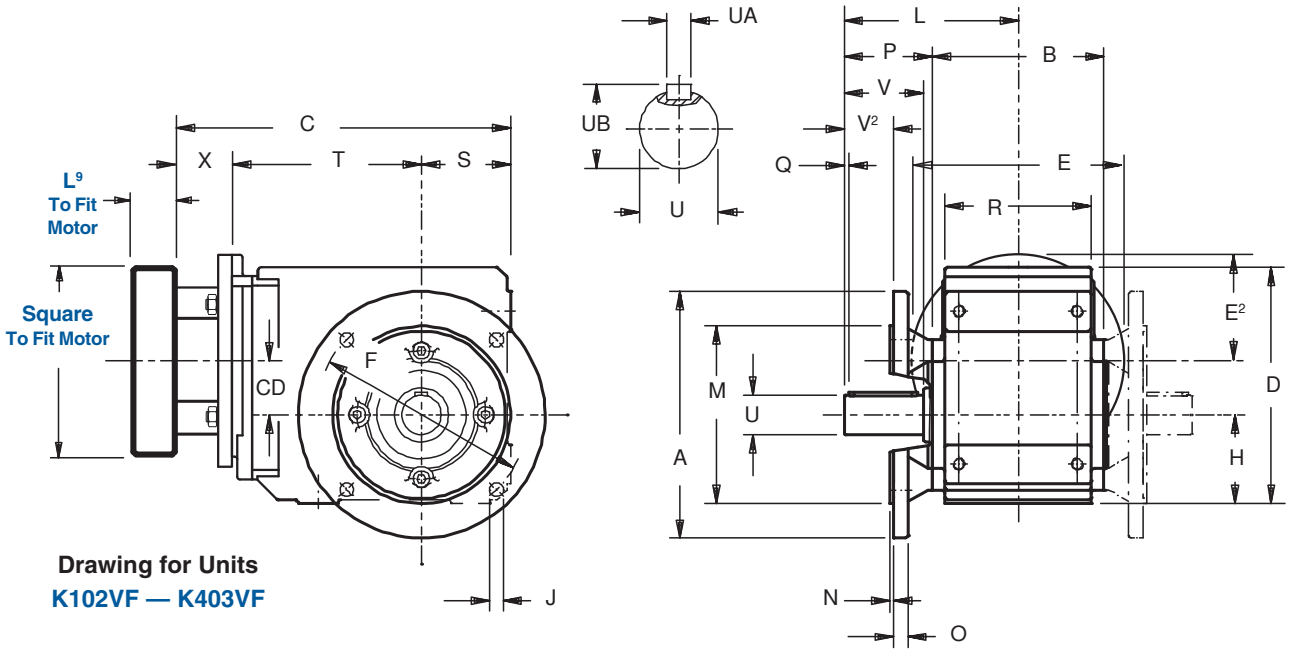
"K" Series – Foot Mounting Unit Dimensions (Inches) – "N" Housing Style

Base	MT10			MT20			MT30			MT40			MT50			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	9.40	4.88	1.42	9.96	5.04	–	–	–	–	–	–	–	–	–	31
K202	1.81	9.76	5.63	1.81	10.32	5.79	1.81	10.79	5.87	–	–	–	–	–	–	40
K203	1.81	11.22	7.09	–	–	–	–	–	–	–	–	–	–	–	–	53
K302	2.07	10.94	6.42	2.07	11.49	6.57	2.07	11.96	6.65	–	–	–	–	–	–	67
K303	2.07	12.39	7.87	.63	13.19	8.27	–	–	–	–	–	–	–	–	–	73
K402	–	–	–	2.36	12.87	7.36	2.36	13.34	7.44	2.36	14.60	7.56	–	–	–	93
K403	2.36	13.77	8.66	.91	14.57	9.06	–	–	–	–	–	–	–	–	–	100
K513	–	–	–	.59	12.68	6.77	.59	13.15	6.85	.59	14.41	6.97	–	–	–	106
K514	–	–	–	.59	14.37	8.46	–	–	–	–	–	–	–	–	–	109
K613	–	–	–	.71	14.21	7.52	.71	14.68	7.60	.71	15.94	7.72	.71	11.48	8.27	170
K614	–	–	–	.71	15.90	9.21	–	–	–	–	–	–	–	–	–	177
K713	–	–	–	–	–	–	.79	15.98	8.70	.79	17.24	8.82	.79	12.54	9.33	221
K714	–	–	–	.79	17.24	10.35	.79	18.42	11.14	–	–	–	–	–	–	234
K813	–	–	–	–	–	–	.94	17.79	9.72	.94	19.01	9.80	.94	13.52	10.31	309
K814	–	–	–	–	–	–	.94	20.20	12.13	–	–	–	–	–	–	331
K913	–	–	–	–	–	–	–	–	–	.98	22.16	11.57	.98	15.30	12.09	508
K914	–	–	–	–	–	–	.98	23.35	13.90	.98	24.96	14.37	–	–	–	530
K1013	–	–	–	–	–	–	–	–	–	–	–	–	1.10	27.50	15.43	1,055
K1014	–	–	–	–	–	–	–	–	–	1.10	30.08	17.72	1.10	30.77	18.70	1,079

See web site for drawings.



ServoFit® "K" Series–Helical/Bevel Round Flange – "F" Housing Shaft Output – Dimensional Data



Drawing for Units
K102VF — K403VF

Table No. 1 **"K" Series – Round Flange Unit Dimensions (Inches) – "F" Housing Style**

Base Module	A	B	D	F	H	J	L	M		N	O	P	Q	R	S	V	V²	Z¹
K102	6.30	4.17	6.30	5.12	2.36	.35	4.53	4.331	+.001/-.0004	.14	.39	2.44	.16	3.54	2.36	1.97	1.18	–
K202/203	7.87	5.28	7.48	6.50	2.56	.43	5.31	5.118	+.001/-.0004	.14	.47	2.68	.16	4.53	2.56	2.36	1.42	–
K302/303	7.87	5.75	8.39	6.50	2.95	.43	5.59	5.118	+.001/-.0004	.14	.55	2.72	.16	5.12	2.95	2.36	1.22	–
K402/403	9.84	6.81	9.45	8.46	3.54	.55	6.54	7.087	+.001/-.0004	.16	.59	3.52	.16	5.83	3.54	2.76	1.95	–
K513/514	9.84	7.28	10.24	8.46	6.30	.55	8.74	7.087	+.001/-.0004	.16	.59	5.10	.16	6.30	3.94	3.54	–	5.98
K613/614	11.81	7.87	12.20	10.43	7.48	.55	9.29	9.055	+.001/-.001	.16	.67	5.35	.16	6.61	4.72	3.94	–	6.77
K713/714	13.78	8.90	13.46	11.81	8.35	.71	10.91	9.842	+.000/-.001	.20	.71	6.46	.16	7.48	4.92	4.72	–	7.52
K813/814	15.75	11.10	16.14	13.78	10.43	.71	12.83	11.811	+.000/-.001	.20	.79	7.28	.20	9.25	5.71	5.51	–	8.11
K913/914	17.72	12.99	19.49	15.75 *	12.40	.71	15.16	13.780	+.000/-.001	.20	.91	8.66	.31	11.22	7.09	6.69	–	9.84
K1013/K1014	21.65	14.02	23.27	19.69 *	14.76	.71	18.35	17.716	+.000/-.002	.20	.98	11.34	.59	15.75	8.86	8.27	–	12.01

* K913 thru K1014 has 8 mounting holes in the output flange instead of 4 as shown in drawing.

Table No. 2 **Metric output available on request.**

	Standard Shaft — inches			Optional Shaft — mm		
Base Module	U	UA — Key	UB	U	UA — Key	UB
K102	1.000	$^1/_4 \times ^1/_4 \times 1^9/_{16}$	1.11	25_{k6}	M8 ×7×40	28
K202/203	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	M8 ×7×50	33
K302/303	1.250	$^1/_4 \times ^1/_4 \times 1^{15}/_{16}$	1.36	30_{k6}	M8 ×7×50	33
K402/403	1.375	$^5/_{16} \times ^5/_{16} \times 2^5/_{16}$	1.51	40_{k6}	M12 ×8×70	43
K513/514	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	45_{k6}	M14 ×9×80	48.5
K613/614	1.750	$^3/_8 \times ^3/_8 \times 3^5/_{32}$	1.92	50_{k6}	M14 ×9×90	53.5
K713/714	2.375	$^5/_8 \times ^5/_8 \times 3^{15}/_{16}$	2.65	60_{k6}	M18 ×11×110	64
K813/814	2.875	$^3/_4 \times ^3/_4 \times 4^5/_{16}$	3.21	70_{m6}	M20 ×12×125	74.5
K913/914	3.625	$^7/_8 \times ^7/_8 \times 5^1/_2$	4.01	90_{m6}	M25 ×14×140	95
K1013/K1014	4.375	$1 \times 1 \times 7^1/_8$	4.82	110_{m6}	M28 ×16×180	116

Part No. Example

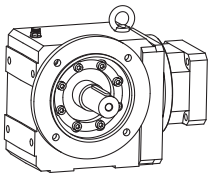
Round Flange with TriAdapt® Motor Adapter

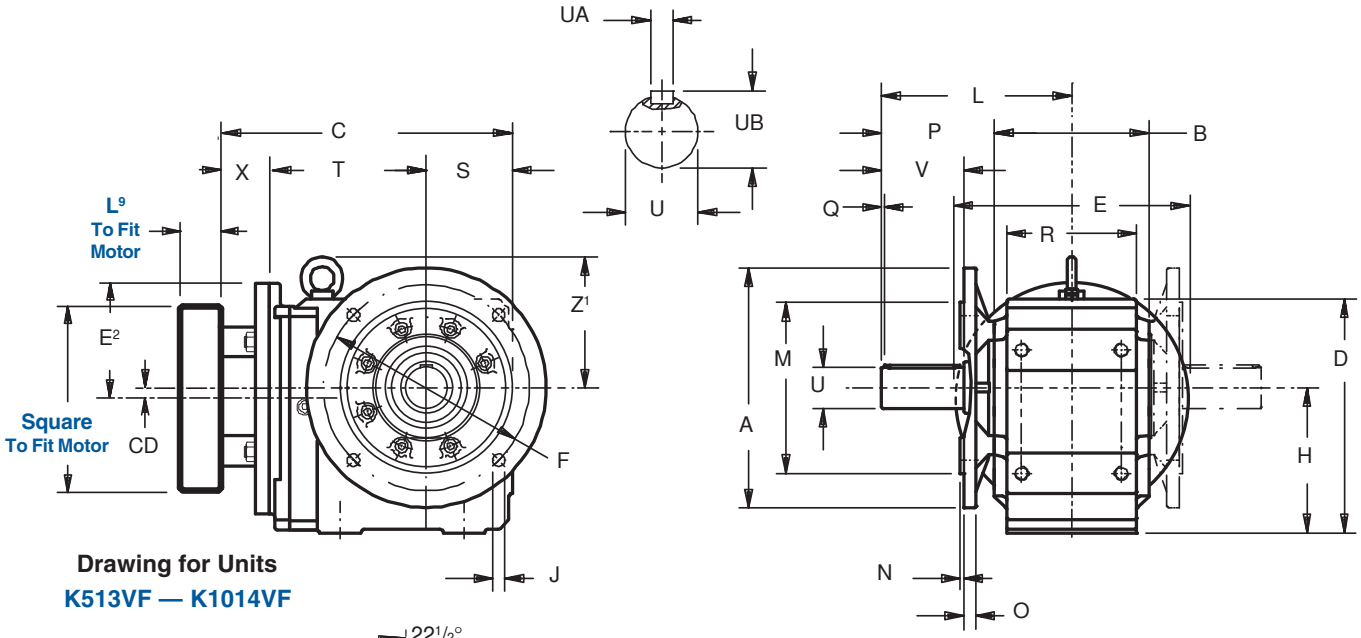
K303VF0650 MT20

For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

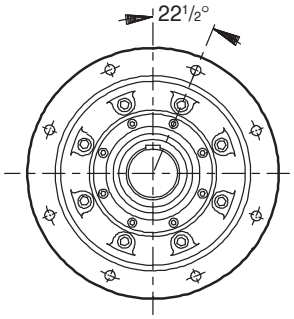
See web site for drawings.

ServoFit® "K" Series–Helical/Bevel Round Flange – "F" Housing Shaft Output – Dimensional Data





Drawing for Units
K513VF — K1014VF



K913 thru K1014 has 8 mounting holes in the output flange located as shown.

Table No. 3 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness L9 Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

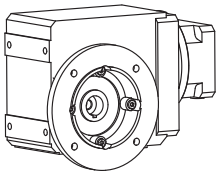
1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

Table No. 4

"K" Series – Flange Mounting Unit Dimensions (Inches) – "F" Housing Style

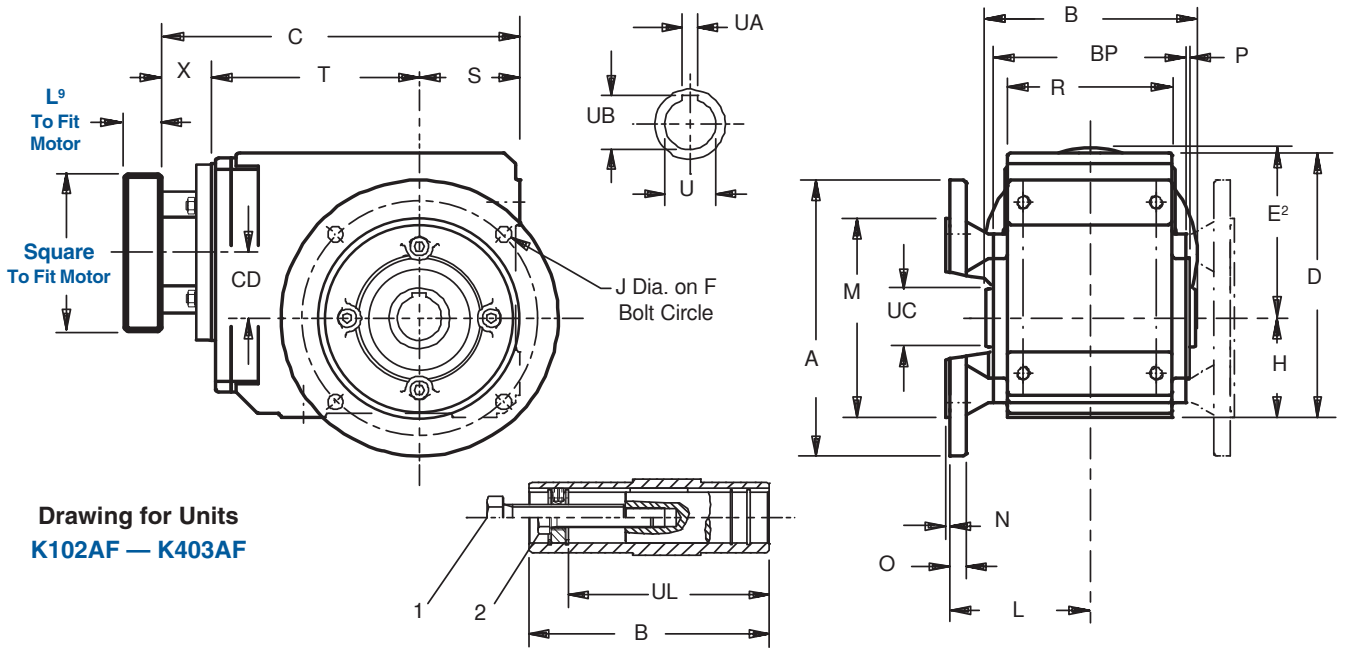
Base Module	MT10			MT20			MT30			MT40			MT50			Wt. lbs.
	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	
K102	1.42	9.40	4.88	1.42	9.96	5.04	–	–	–	–	–	–	–	–	–	31
K202	1.81	9.76	5.63	1.81	10.32	5.79	1.81	10.79	5.87	–	–	–	–	–	–	40
K203	1.81	11.22	7.09	–	–	–	–	–	–	–	–	–	–	–	–	53
K302	2.07	10.94	6.42	2.07	11.49	6.57	2.07	11.96	6.65	–	–	–	–	–	–	67
K303	2.07	12.39	7.87	.63	13.19	8.27	–	–	–	–	–	–	–	–	–	73
K402	–	–	–	2.36	12.87	7.36	2.36	13.34	7.44	2.36	14.60	7.56	–	–	–	93
K403	2.36	13.77	8.66	.91	14.57	9.06	–	–	–	–	–	–	–	–	–	100
K513	–	–	–	.59	12.68	6.77	.59	13.15	6.85	.59	14.41	6.97	–	–	–	106
K514	–	–	–	.59	14.37	8.46	–	–	–	–	–	–	–	–	–	109
K613	–	–	–	.71	14.21	7.52	.71	14.68	7.60	.71	15.94	7.72	.71	11.48	8.27	170
K614	–	–	–	.71	15.90	9.21	–	–	–	–	–	–	–	–	–	177
K713	–	–	–	–	–	–	.79	15.98	8.70	.79	17.24	8.82	.79	12.54	9.33	221
K714	–	–	–	.79	17.24	10.35	.79	18.42	11.14	–	–	–	–	–	–	234
K813	–	–	–	–	–	–	.94	17.79	9.72	.94	19.01	9.80	.94	13.52	10.31	309
K814	–	–	–	–	–	–	.94	20.20	12.13	–	–	–	–	–	–	331
K913	–	–	–	–	–	–	–	–	–	.98	22.16	11.57	.98	15.30	12.09	508
K914	–	–	–	–	–	–	.98	23.35	13.90	.98	24.96	14.37	–	–	–	530
K1013	–	–	–	–	–	–	–	–	–	–	–	–	1.10	27.50	15.43	1,055
K1014	–	–	–	–	–	–	–	–	–	1.10	30.08	17.72	1.10	30.77	18.70	1,079

See web site for drawings.



ServoFit® "K" Series–Helical/Bevel Round Flange – "F" Housing Hollow Output – Dimensional Data

See Page 163 for installation of hollow ouput.



Drawing for Units
K102AF — K403AF

Table No. 1 "K" Series – Hollow Output, Round Flange Unit Dimensions (Inches) – "F" Housing Style

Base Module	A	B	D	F	H	J	L	M	N	O	P	R	S	Z_1	BP	UC	UL	1
K102	6.30	4.72	6.30	5.12	2.36	.35	3.35	4.331 +.001/-.0004	.14	.39	.12	3.54	2.36	–	3.54	1.57	3.86	1/2-13
K202/203	7.87	5.83	7.48	6.50	2.56	.43	3.90	5.118 +.001/-.0004	.14	.47	.12	4.53	2.56	–	3.94	1.77	4.78	1/2-13
K302/303	7.87	6.30	8.39	6.50	2.95	.43	4.37	5.118 +.001/-.0004	.14	.55	.12	5.12	2.95	–	4.53	1.97	4.92	5/8-11
K402/403	9.84	7.40	9.45	8.46	3.54	.55	4.98	7.087 +.001/-.0004	.16	.59	.14	5.83	3.54	–	5.12	2.17	6.18	3/4-10
K513/514	9.84	7.87	10.24	8.46	6.30	.55	5.20	7.087 +.001/-.0004	.16	.59	.14	6.30	3.94	5.98	5.12	2.56	6.46	3/4-10
K613/614	11.81	8.46	12.20	10.43	7.48	.55	5.35	9.055 +.001/-.001	.16	.67	.14	6.61	4.72	6.77	6.50	2.76	7.05	3/4-10
K713/714	13.78	9.53	13.46	11.81	8.35	.71	6.18	9.842 +.000/-.001	.20	.71	.14	7.48	4.92	7.52	7.28	3.35	8.43	1-8
K813/814	15.75	11.81	16.14	13.78	10.43	.71	7.32	11.811 +.000/-.001	.20	.79	.16	9.25	5.71	8.11	8.46	3.94	10.35	1-8
K913/914	17.72	13.78	19.49	15.75	12.40	.71	8.46	13.780 +.000/-.001	.20	.91	.20	11.22	7.09	9.84	10.43	4.33	12.32	1-8
K1013/K1014	21.65	16.14	23.27	19.69	14.76	.71	10.08	17.716 +.000/-.002	.20	.98	.28	15.75	8.86	12.01	11.81	5.12	14.25	1 1/4-7

Table No. 2 Metric output available on request.

	Standard Bore - inches			Optional Bore - mm		
Base Module	U	UA	UB	U	UA	UB
K102	1.000	.250	1.11	25H7	8JS9	28.3
K202/203	1.1875	.250	1.31	30H7	8JS9	33.3
K302/303	1.375	.312	1.52	35H7	10JS9	38.3
K402/403	1.500	.375	1.67	40H7	12JS9	43.3
K513/514	2.000	.500	2.13	50H7	14JS9	53.8
K613/614	2.000	.500	2.23	50H7	14JS9	53.8
K713/714	2.375	.625	2.66	60H7	18JS9	64.4
K813/814	2.750	.625	3.03	70H7	20JS9	74.9
K913/914	3.250	.750	3.59	90H7	25JS9	95.4
K1013/K1014	4.000	1.000	4.31	100H7	28JS9	116

Part No. Example

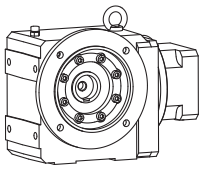
Round Flange with TriAdapt® Motor Adapter

K303AF0650 MT20

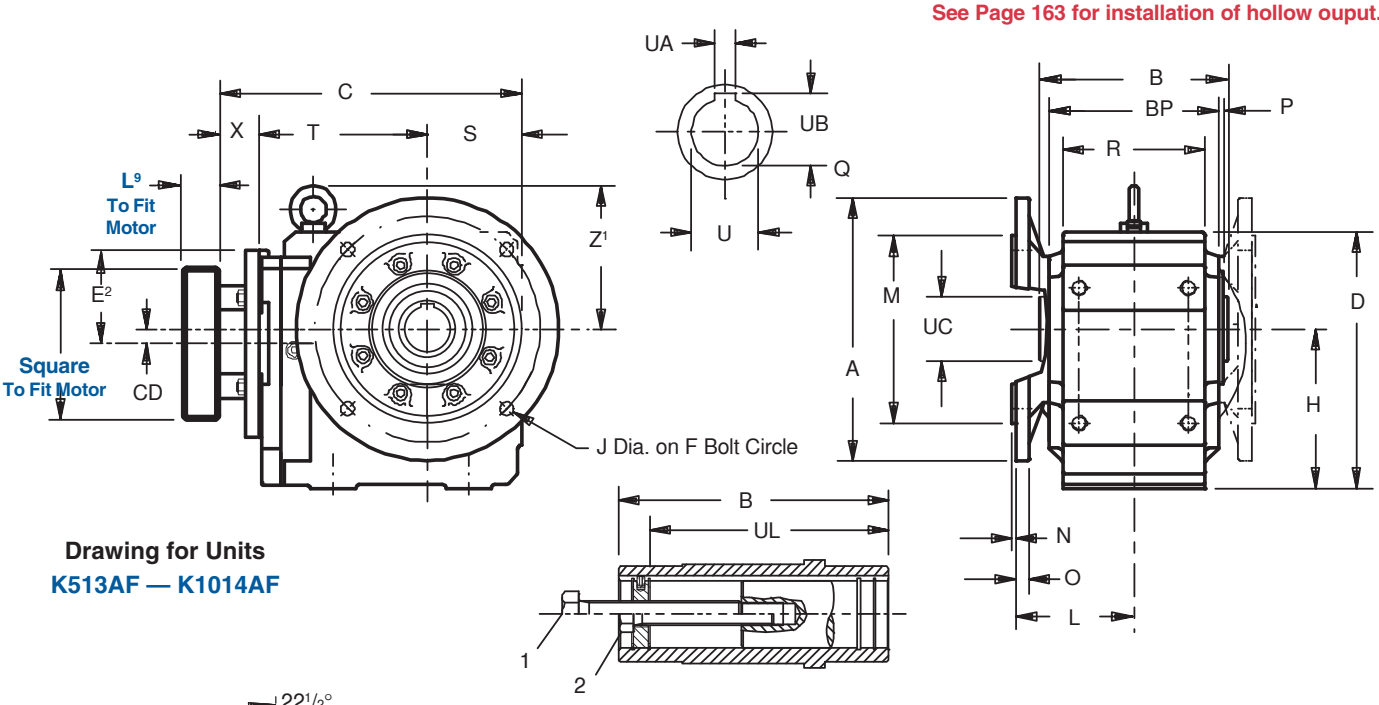
For approximate weight, add adapter weight from Table 3 and base module weight from Table 4.

See web site for drawings.

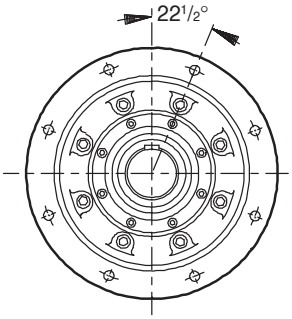
ServoFit® "K" Series–Helical/Bevel Round Flange – "F" Housing Hollow Output – Dimensional Data



See Page 163 for installation of hollow ouput.



Drawing for Units
K513AF — K1014AF



K913 thru K1014 has 8 mounting holes in the output flange located as shown.

Table No. 3 "MT" Motor Plate Dimensions

Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness		Inches			Wt. lbs.
			L9 Minimum					
	mm	ins.	mm	inches	E	E2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

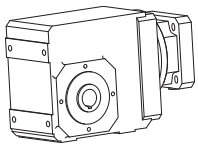
1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

Table No. 4

"K" Series – Flange Mounting Unit Dimensions (Inches) – "F" Housing Style

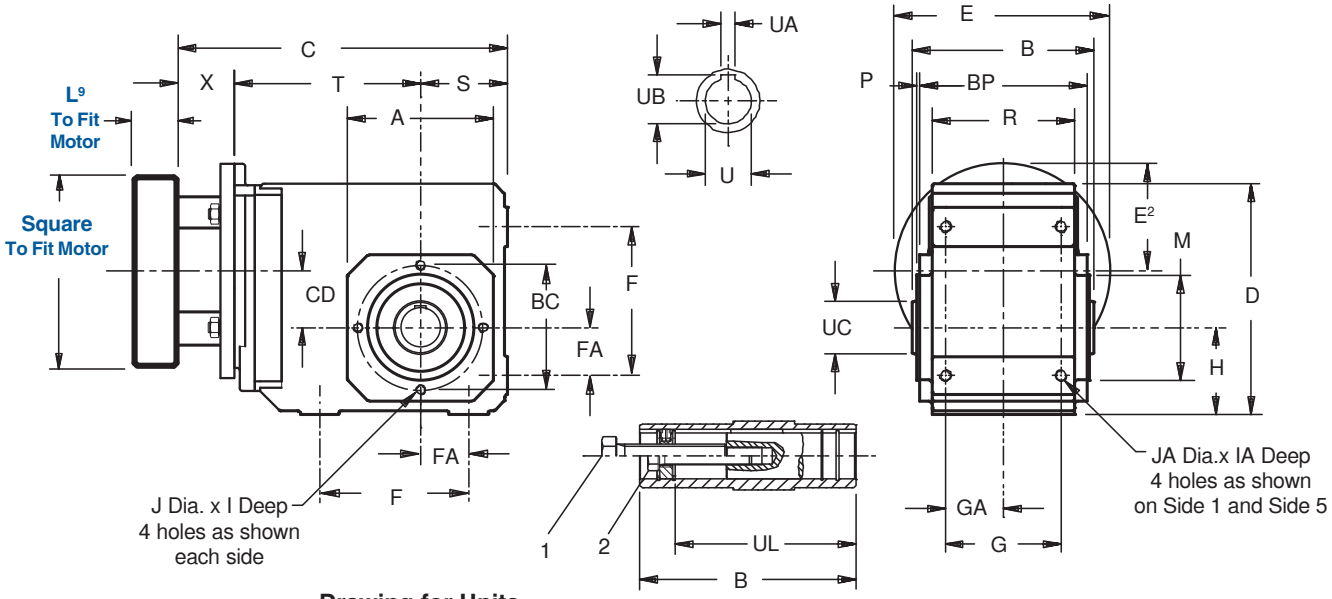
Base	MT10			MT20			MT30			MT40			MT50			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	9.40	4.88	1.42	9.96	5.04	–	–	–	–	–	–	–	–	–	31
K202	1.81	9.76	5.63	1.81	10.32	5.79	1.81	10.79	5.87	–	–	–	–	–	–	40
K203	1.81	11.22	7.09	–	–	–	–	–	–	–	–	–	–	–	–	53
K302	2.07	10.94	6.42	2.07	11.49	6.57	2.07	11.96	6.65	–	–	–	–	–	–	67
K303	2.07	12.39	7.87	.63	13.19	8.27	–	–	–	–	–	–	–	–	–	73
K402	–	–	–	2.36	12.87	7.36	2.36	13.34	7.44	2.36	14.60	7.56	–	–	–	93
K403	2.36	13.77	8.66	.91	14.57	9.06	–	–	–	–	–	–	–	–	–	100
K513	–	–	–	.59	12.68	6.77	.59	13.15	6.85	.59	14.41	6.97	–	–	–	106
K514	–	–	–	.59	14.37	8.46	–	–	–	–	–	–	–	–	–	109
K613	–	–	–	.71	14.21	7.52	.71	14.68	7.60	.71	15.94	7.72	.71	11.48	8.27	170
K614	–	–	–	.71	15.90	9.21	–	–	–	–	–	–	–	–	–	177
K713	–	–	–	–	–	–	.79	15.98	8.70	.79	17.24	8.82	.79	12.54	9.33	221
K714	–	–	–	.79	17.24	10.35	.79	18.42	11.14	–	–	–	–	–	–	234
K813	–	–	–	–	–	–	.94	17.79	9.72	.94	19.01	9.80	.94	13.52	10.31	309
K814	–	–	–	–	–	–	.94	20.20	12.13	–	–	–	–	–	–	331
K913	–	–	–	–	–	–	–	–	–	.98	22.16	11.57	.98	15.30	12.09	508
K914	–	–	–	–	–	–	.98	23.35	13.90	.98	24.96	14.37	–	–	–	530
K1013	–	–	–	–	–	–	–	–	–	–	–	–	1.10	27.50	15.43	1,055
K1014	–	–	–	–	–	–	–	–	–	1.10	30.08	17.72	1.10	30.77	18.70	1,079

See web site for drawings.



ServoFit® "K" Series–Helical/Bevel Tapped Hole – "G" Housing Hollow Output – Dimensional Data

See Page 163 for installation of hollow ouput.



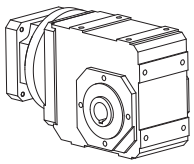
Drawing for Units
K102AG — K403AG

Table No. 1 **"K" Series – Tapped Hole Unit Dimensions (Inches) – "G" Housing Style**

Base Module	A	B	D	F	G	H	I	J	M	P	R	S	Z[1]	BC	BP	FA	GA	IA	JA
K102	4.13	4.72	6.30	3.54	2.76	2.36	.51	4-M8	2.953 +.001/-.0003	.12	3.54	2.36	–	3.54	4.17	1.18	1.38	.51	M8
K202/203	4.57	5.83	7.48	4.53	3.54	2.56	.51	4-M8	3.228 +.001/-.0004	.12	4.53	2.56	–	3.94	5.28	1.38	1.77	.63	M10
K302/303	5.20	6.30	8.39	5.12	4.13	2.95	.51	4-M8	3.740 +.001/-.0004	.12	5.12	2.95	–	4.53	5.75	1.57	2.07	.63	M10
K402/403	5.98	7.40	9.45	6.10	4.72	3.54	.63	4-M10	4.331 +.001/-.0004	.14	5.83	3.54	–	5.12	6.81	1.97	2.36	.75	M12
K513/514	5.71	7.87	10.24	5.51	4.92	6.30	.63	8-M10	4.331 +.001/-.0004	.14	6.30	3.94	5.98	5.12	7.28	1.57	2.46	1.02	M16
K613/614	7.09	8.46	12.20	6.30	5.12	7.48	.63	8-M10	5.512 +.001/-.0004	.14	6.61	4.72	6.77	6.50	7.87	1.97	2.56	1.02	M16
K713/714	7.68	9.53	13.46	7.09	5.71	8.35	.75	8-M12	6.102 +.001/-.0004	.14	7.48	4.92	7.52	7.28	8.90	2.17	2.85	1.22	M20
K813/814	8.90	11.81	16.14	9.45	7.28	10.43	.75	8-M12	7.283 +.001/-.001	.16	9.25	5.71	8.11	8.46	11.10	2.95	3.64	1.50	M24
K913/914	11.02	13.78	19.49	11.02	8.86	12.40	1.02	8-M16	9.055 +.001/-.001	.20	11.22	7.09	9.84	10.43	12.99	3.74	4.43	1.89	M30
K1013/K1014	13.38	16.14	23.27	11.81	12.99	14.76	1.30	8-M20	9.843 +.001/-.001	.28	15.59	8.86	12.01	11.81	15.60	4.53	6.50	1.77	1.54

Table No. 2

Base Module	UC	UL	1
K102	1.57	3.86	1/2-13
K202/203	1.77	4.78	1/2-13
K302/303	1.97	4.92	5/8-11
K402/403	2.17	6.18	3/4-10
K513/514	2.56	6.46	3/4-10
K613/614	2.76	7.05	3/4-10
K713/714	3.35	8.43	1-8
K813/814	3.94	10.35	1-8
K913/914	4.33	12.32	1-8
K1013/K1014	5.12	14.25	1 1/4-7



K1 Housing with tapped holes on Side 1, Side 2, and Side 5.

Table No. 3 **Metric output available on request.**

	Standard Bore - inches			Optional Bore - mm		
Base Module	U	UA	UB	U	UA	UB
K102	1.000	.250	1.11	25H7	8JS9	28.3
K202/203	1.1875	.250	1.31	30H7	8JS9	33.3
K302/303	1.375	.312	1.52	35H7	10JS9	38.3
K402/403	1.500	.375	1.67	40H7	12JS9	43.3
K513/514	2.000	.500	2.13	50H7	14JS9	53.8
K613/614	2.000	.500	2.23	50H7	14JS9	53.8
K713/714	2.375	.625	2.66	60H7	18JS9	64.4
K813/814	2.750	.625	3.03	70H7	20JS9	74.9
K913/914	3.250	.750	3.59	90H7	25JS9	95.4
K1013/K1014	4.000	1.000	4.31	100H7	28JS9	116

1. Removal Bolt – not supplied.
2. Mounting Bolt – must be smaller than removal bolt.

For approximate weight, add adapter weight from Table 4 and base module weight from Table 5.

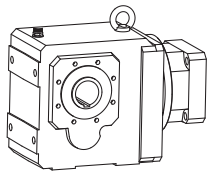
Part No. Example

Tapped Holes Housing with TriAdapt® Motor Adapter

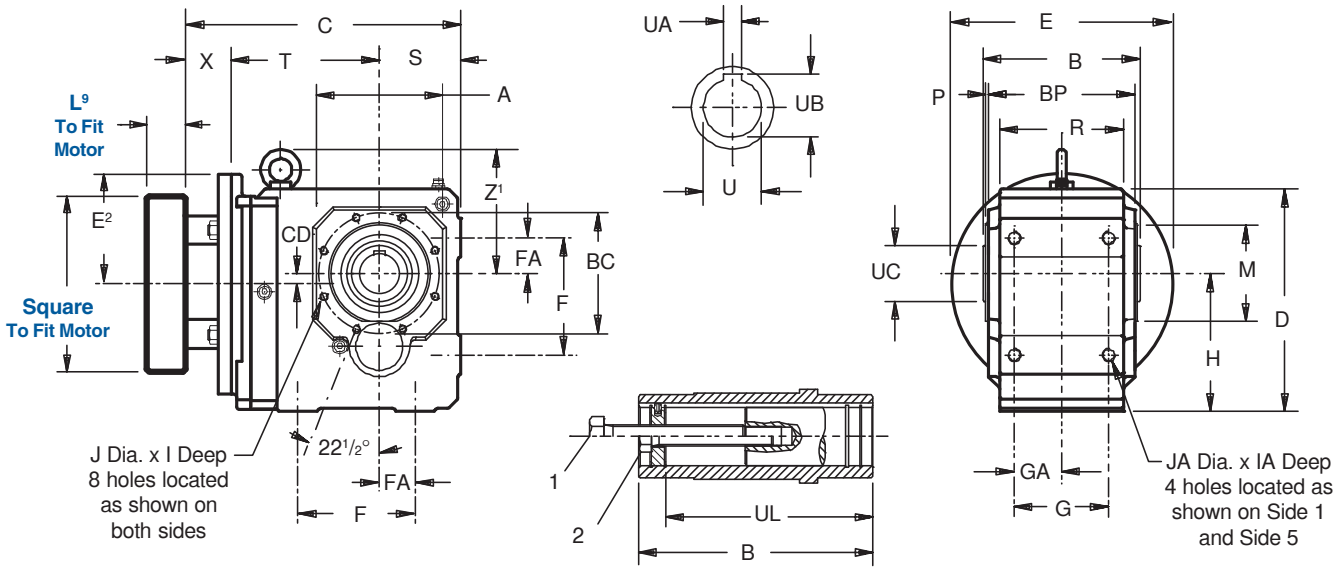
K303AG0650 MT20

See web site for drawings.

ServoFit® "K" Series–Helical/Bevel
Tapped Hole – "G" Housing
Hollow Output – Dimensional Data



See Page 163 for installation of hollow ouput.



Drawing for Units
K513AG — K1014AG

Table No. 4

"K" Series – Tapped Hole Unit Dimensions (Inches) – "G" Housing Style

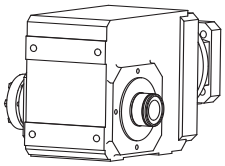
Base	MT10			MT20			MT30			MT40			MT50			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	9.40	4.88	1.42	9.96	5.04	–	–	–	–	–	–	–	–	–	31
K202	1.81	9.76	5.63	1.81	10.32	5.79	1.81	10.79	5.87	–	–	–	–	–	–	40
K203	1.81	11.22	7.09	–	–	–	–	–	–	–	–	–	–	–	–	53
K302	2.07	10.94	6.42	2.07	11.49	6.57	2.07	11.96	6.65	–	–	–	–	–	–	67
K303	2.07	12.39	7.87	.63	13.19	8.27	–	–	–	–	–	–	–	–	–	73
K402	–	–	–	2.36	12.87	7.36	2.36	13.34	7.44	2.36	14.60	7.56	–	–	–	93
K403	2.36	13.77	8.66	.91	14.57	9.06	–	–	–	–	–	–	–	–	–	100
K513	–	–	–	.59	12.68	6.77	.59	13.15	6.85	.59	14.41	6.97	–	–	–	106
K514	–	–	–	.59	14.37	8.46	–	–	–	–	–	–	–	–	–	109
K613	–	–	–	.71	14.21	7.52	.71	14.68	7.60	.71	15.94	7.72	.71	11.48	8.27	170
K614	–	–	–	.71	15.90	9.21	–	–	–	–	–	–	–	–	–	177
K713	–	–	–	–	–	–	.79	15.98	8.70	.79	17.24	8.82	.79	12.54	9.33	221
K714	–	–	–	.79	17.24	10.35	.79	18.42	11.14	–	–	–	–	–	–	234
K813	–	–	–	–	–	–	.94	17.79	9.72	.94	19.01	9.80	.94	13.52	10.31	309
K814	–	–	–	–	–	–	.94	20.20	12.13	–	–	–	–	–	–	331
K913	–	–	–	–	–	–	–	–	–	.98	22.16	11.57	.98	15.30	12.09	508
K914	–	–	–	–	–	–	.98	23.35	13.90	.98	24.96	14.37	–	–	–	530
K1013	–	–	–	–	–	–	–	–	–	–	–	–	1.10	27.50	15.43	1,055
K1014	–	–	–	–	–	–	–	–	–	1.10	30.08	17.72	1.10	30.77	18.70	1,079

Table No. 5 **"MT" Motor Plate Dimensions**

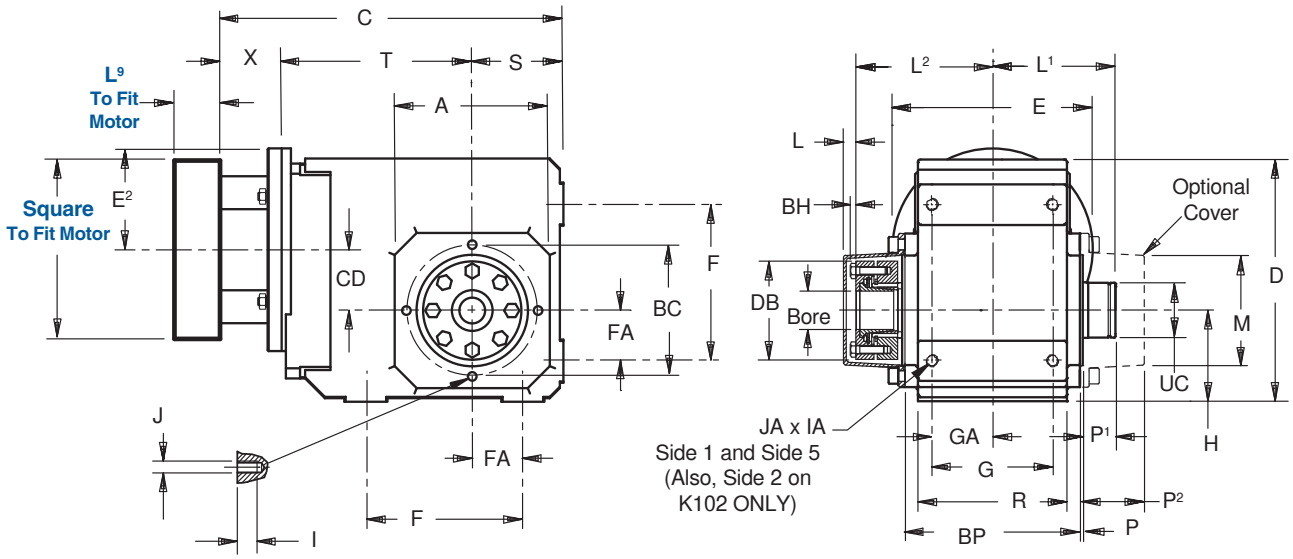
Motor Adapter	Motor Shaft D6 Max. 1)		Motor Plate 2) Thickness L9 Minimum		Inches			Wt.
	mm	ins.	mm	inches	E	E2	X	lbs.
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L9) will vary with motor shaft length but will not be less than shown.

See web site for drawings.



ServoFit® "K" Series–Helical/Bevel
Tapped Hole – "G" Housing
Single Bushing – Dimensional Data



Drawing for Units
K102WG — K403WG

Important: A 1/32 x 45° chamfer minimum is recommended for the shaft end. The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 1 **"K" Series – Single Side Wobble Free – Unit Dimensions (Inches)**

Base Module	Max. Bore	A	D	F	G	H	I	J	L	L_1	L_2	M	P	P_1	P_2	R	S	Z_1	BC	BH
K102	1.000	4.13	6.30	3.54	2.76	2.36	.51	4-M8	.24	3.15	3.66	3.07	.12	.95	1.62	3.54	2.36	–	3.54	.16
K202/203	1.1875	4.57	7.48	4.53	3.54	2.56	.51	4-M8	.39	3.78	4.27	3.46	.12	1.02	1.54	4.53	2.56	–	3.94	.16
K302/303	1.500	5.20	8.39	5.12	4.13	2.95	.51	4-M8	.43	4.02	4.54	3.78	.12	1.02	1.55	5.12	2.95	–	4.53	.16
K402/403	1.500	5.98	9.45	6.10	4.72	3.54	.63	4-M10	.47	4.69	5.32	4.33	.14	1.14	1.83	5.83	3.54	–	5.12	.20
K513/514	2.000	5.71	10.24	5.51	4.92	6.30	.63	8-M10	.43	4.96	5.61	4.54	.14	1.18	1.87	6.30	3.94	5.98	5.12	.20
K613/614	2.1875	7.09	12.20	6.30	5.12	7.48	.63	8-M10	.51	5.12	6.10	5.00	.14	1.38	2.11	6.61	4.72	5.98	6.50	.24
K713/714	2.375	7.68	13.46	7.09	5.71	8.35	.75	8-M12	—	6.20	7.29	—	.14	1.61	2.70	7.48	4.92	7.52	7.28	.24
K813/814	2.750	8.90	16.14	9.45	7.28	10.43	.75	8-M12	—	7.58	8.70	—	.16	2.03	2.99	9.25	5.71	8.11	8.46	.31

Table No. 2

Base Module	BP	DB	FA	GA	IA	JA	UC
K102	4.17	2.76	1.18	1.38	.51	M8	1.54
K202/203	5.28	3.07	1.38	1.77	.63	M10	1.73
K302/303	5.75	3.31	1.57	2.07	.63	M10	1.93
K402/403	6.81	3.82	1.97	2.36	.75	M12	2.13
K513/514	7.28	4.13	1.57	2.46	1.02	M16	2.56
K613/614	7.87	4.65	1.97	2.56	1.02	M16	2.91
K713/714	8.90	5.43	2.17	2.85	1.22	M20	3.35
K813/814	11.10	6.22	2.95	3.64	1.50	M24	3.94

Table No. 3 **"MT" Motor Plate Dimensions**

Motor Adapter	Motor Shaft D^6 Max. [1]		Motor Plate [2] Thickness		Inches			Wt. lbs.
			L^9 Minimum					
	mm	ins.	mm	inches	E	E^2	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

1) If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
2) Motor plate maximum thickness (L^9) will vary with motor shaft length but will not be less than shown.

Table No. 4
"WF" Single Side Bushing – Metric

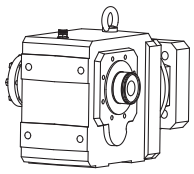
Unit	Stock Bores Sizes — mm		
	25	30	35
K1	WF1-25	–	–
K2	–	WF2-30	–
K3	–	WF3-30	WF3-35

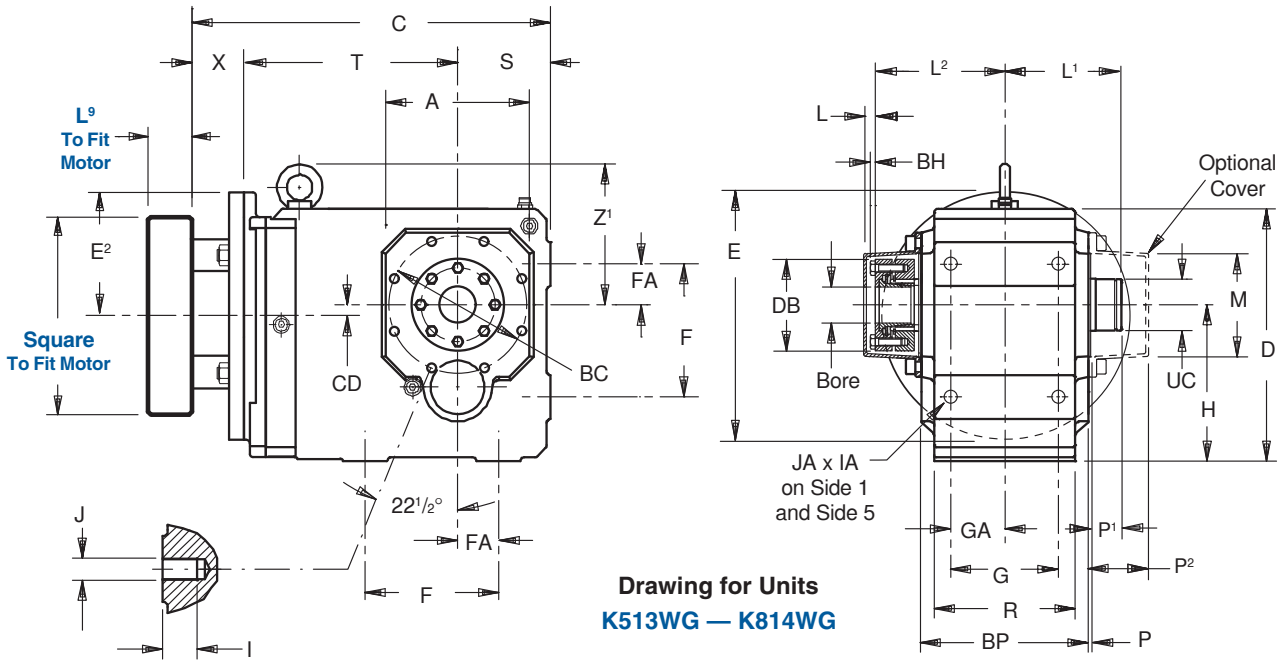
Table No. 5 **"WF" Single Side Bushing – Inches**

Unit	Stock Bores Sizes					
	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2
K1	WF1-100	–	–	–	–	–
K2	WF2-100	WF2-103	–	–	–	–
K3	WF3-100	WF3-103	WF3-104	WF3-106	WF3-107	WF3-108
K4	WF4-100	WF4-103	WF4-104	WF4-106	WF4-107	WF4-108

See web site for drawings.

ServoFit® "K" Series–Helical/Bevel Tapped Hole – "G" Housing Single Bushing – Dimensional Data





Drawing for Units
K513WG — K814WG

Table No. 6 "K" Series – Single Side Bushing – Unit Dimensions (Inches) – "G" Housing Style

Base	MT10			MT20			MT30			MT40			MT50			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	9.40	4.88	1.42	9.96	5.04	–	–	–	–	–	–	–	–	–	31
K202	1.81	9.76	5.63	1.81	10.32	5.79	1.81	10.79	5.87	–	–	–	–	–	–	40
K203	1.81	11.22	7.09	–	–	–	–	–	–	–	–	–	–	–	–	53
K302	2.07	10.94	6.42	2.07	11.49	6.57	2.07	11.96	6.65	–	–	–	–	–	–	67
K303	2.07	12.39	7.87	.63	13.19	8.27	–	–	–	–	–	–	–	–	–	73
K402	–	–	–	2.36	12.87	7.36	2.36	13.34	7.44	2.36	14.60	7.56	–	–	–	93
K403	2.36	13.77	8.66	.91	14.57	9.06	–	–	–	–	–	–	–	–	–	100
K513	–	–	–	.59	12.68	6.77	.59	13.15	6.85	.59	14.41	6.97	–	–	–	106
K514	–	–	–	.59	14.37	8.46	–	–	–	–	–	–	–	–	–	109
K613	–	–	–	.71	14.21	7.52	.71	14.68	7.60	.71	15.94	7.72	.71	11.48	8.27	170
K614	–	–	–	.71	15.90	9.21	–	–	–	–	–	–	–	–	–	177
K713	–	–	–	–	–	–	.79	15.98	8.70	.79	17.24	8.82	.79	12.54	9.33	221
K714	–	–	–	.79	17.24	10.35	.79	18.42	11.14	–	–	–	–	–	–	234
K813	–	–	–	–	–	–	.94	17.79	9.72	.94	19.01	9.80	.94	13.52	10.31	309
K814	–	–	–	–	–	–	.94	20.20	12.13	–	–	–	–	–	–	331

Part No. Example

Unit with TriAdapt® Motor Adapter
1 3/8" Bore Single Bushing
K402WG0560 MT20
WF4–106

SPECIFY BUSHING SIDE WHEN ORDERING

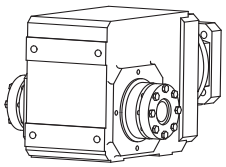
Table No. 7 "WF" Single Side Bushings – Inches

	Stock Bores Sizes — Inches											
Unit	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4
K5	WF5-107	WF5-108	WF5-110	WF5-111	WF5-112	WF5-114	WF5-115	WF5-200	–	–	–	–
K6	WF6-107	WF6-108	WF6-110	WF6-111	WF6-112	–	WF6-115	WF6-200	WF6-203	–	–	–
K7	–	–	–	–	–	–	WF7-115	WF7-200	WF7-203	WF7-206	–	–
K8	–	–	–	–	–	–	–	–	WF8-203	WF8-206	WB7-207	WF8-212

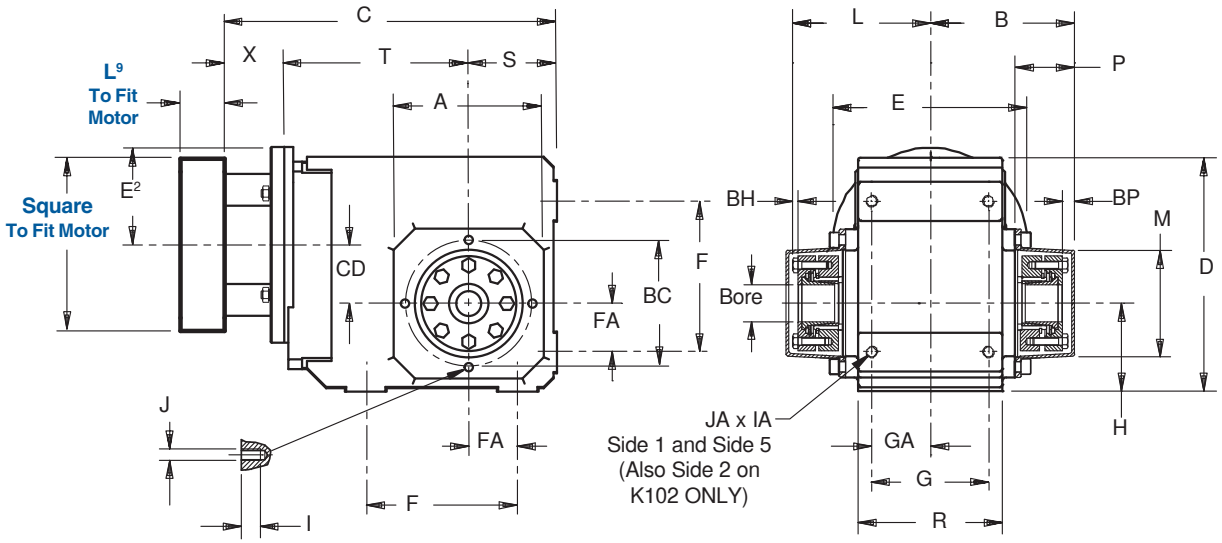
NOTES: A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the reducer. The WF1-100 bushing does not have a tapered cone.

The optional cover caps can be ordered separately.

See web site for drawings.



ServoFit® "K" Series–Helical/Bevel Tapped Hole – "G" Housing Double Bushing – Dimensional Data



Drawing for Units
K102WG — K403WG

Important: A 1/32 x 45° chamfer minimum is recommended for the shaft end. The bushing will accept a shaft with a tolerance of +.000/-.005.

Table No. 1 **"K" Series – Double Side Bushing – Unit Dimensions (Inches)**

Base Module	A	B	D	F	G	H	I	J	L	M	P	R	S	Z[1]	BC	BP	BH	FA	GA	IA	JA
K102	4.13	3.90	6.30	3.54	2.76	2.36	.51	4-M8	3.82	3.07	1.97	3.54	2.36	–	3.54	.24	.16	1.18	1.38	.51	M8
K202/203	4.57	4.68	7.48	4.53	3.54	2.56	.51	4-M8	4.45	3.46	2.05	4.53	2.56	–	3.94	.39	.16	1.38	1.77	.63	M10
K302/303	5.20	4.98	8.39	5.12	4.13	2.95	.51	4-M8	4.70	3.78	2.09	5.12	2.95	–	4.53	.43	.16	1.57	2.07	.63	M10
K402/403	5.98	5.80	9.45	6.10	4.72	3.54	.63	4-M10	5.53	4.33	2.40	5.83	3.54	–	5.12	.47	.20	1.97	2.36	.75	M12
K513/514	5.71	6.05	10.24	5.51	4.92	6.30	.63	8-M10	5.81	4.54	2.40	6.30	3.94	5.98	5.12	.43	.20	1.57	2.46	1.02	M16
K613/614	7.09	6.61	12.20	6.30	5.12	7.48	.63	8-M10	6.34	5.00	2.68	6.61	4.72	6.77	6.50	.51	.24	1.97	2.56	1.02	M16
K713/714	7.68	7.68	13.46	7.09	5.71	8.35	.75	8-M12	7.53	5.75	2.91	7.48	4.92	7.52	7.28	.39	.24	2.17	2.85	1.22	M20
K813/814	8.90	9.34	16.14	9.45	7.28	10.43	.75	8-M12	9.01	6.95	3.43	9.25	5.71	8.11	8.46	.64	.31	2.95	3.64	1.50	M24

Table No. 2 **"MT" Motor Plate Dimensions**

Motor Adapter	Motor Shaft D[6] Max. [1]		Motor Plate [2] Thickness L[9] Minimum		Inches			Wt. lbs.
	mm	ins.	mm	inches	E	E[2]	X	
MT10	19	.748	21	.83	5.51	2.75	1.57	5
MT20	24	.945	24	.95	6.30	3.15	1.97	8
MT30	38	1.260	25	.98	7.87	3.94	2.36	12
MT40	48	1.890	33	1.30	9.84	4.92	3.50	18
MT50	60	2.362	43	1.69	11.81	5.91	3.21	16

[1] If an adapter bushing is required it will be supplied as a component of the motor mounting plate.
[2] Motor plate maximum thickness (L[9]) will vary with motor shaft length but will not be less than shown.

Table No. 3
"WFB" – Double Side Bushings – Metric

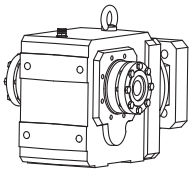
Unit	Stock Bores Sizes — mm			
	25	30	35	40
K1	WFB1-25	–	–	–
K2	–	WFB2-30	–	–
K3	–	WFB3-30	WFB3-35	–
K4	–	–	–	WFB4-40
K5	–	–	–	WFB5-40
K6	–	–	–	WFB6-40

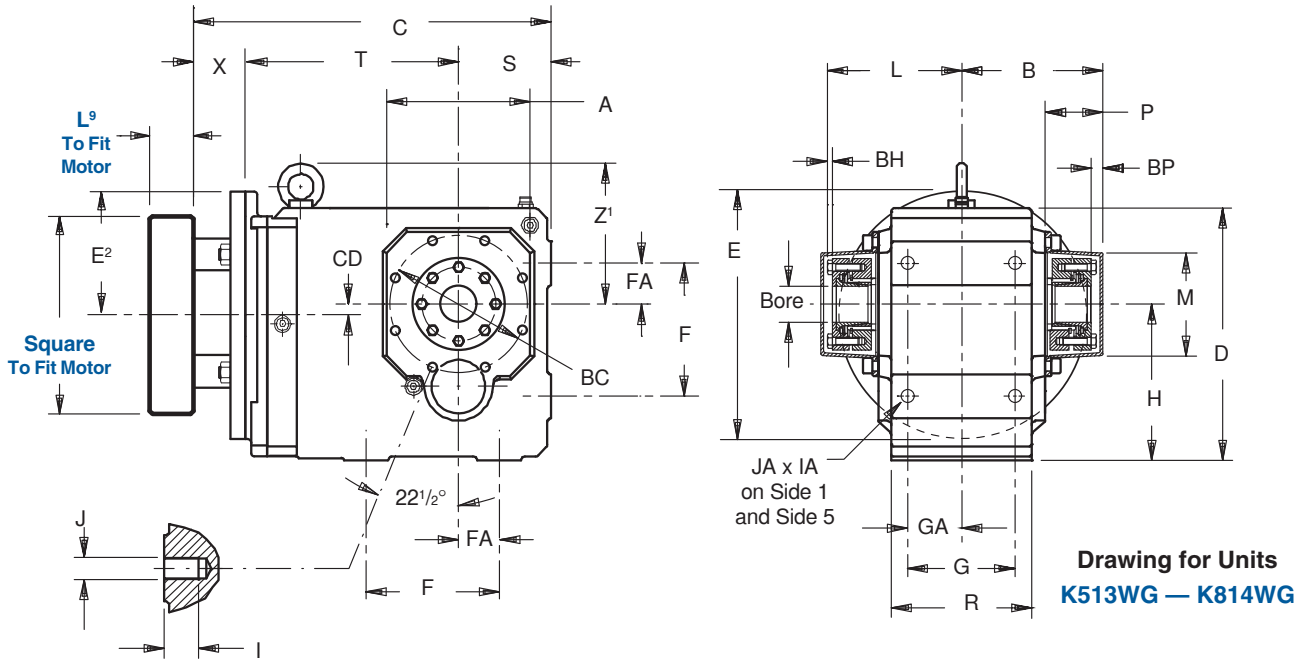
Table No. 4 **"WFB" Double Side Bushings – Inches**

Unit	Stock Bores Sizes					
	1	1 3/16	1 1/4	1 3/8	1 7/16	1 1/2
K1	WFB1-100	–	–	–	–	–
K2	WFB2-100	WFB2-103	–	–	–	–
K3	WFB3-100	WFB3-103	WFB3-104	WFB3-106	WFB3-107	WFB3-108
K4	WFB4-100	WFB4-103	WFB4-104	WFB4-106	WFB4-107	WFB4-108

See web site for drawings.

ServoFit® "K" Series–Helical/Bevel
Tapped Hole – "G" Housing
Double Bushing – Dimensional Data





Drawing for Units
K513WG — K814WG

Table No. 5 "K" Series – Double Side Bushing – Unit Dimensions (Inches) – "G" Housing Style

Base	MT10			MT20			MT30			MT40			MT50			Wt.
Module	CD	C	T	CD	C	T	CD	C	T	CD	C	T	CD	C	T	lbs.
K102	1.42	9.40	4.88	1.42	9.96	5.04	–	–	–	–	–	–	–	–	–	31
K202	1.81	9.76	5.63	1.81	10.32	5.79	1.81	10.79	5.87	–	–	–	–	–	–	40
K203	1.81	11.22	7.09	–	–	–	–	–	–	–	–	–	–	–	–	53
K302	2.07	10.94	6.42	2.07	11.49	6.57	2.07	11.96	6.65	–	–	–	–	–	–	67
K303	2.07	12.39	7.87	.63	13.19	8.27	–	–	–	–	–	–	–	–	–	73
K402	–	–	–	2.36	12.87	7.36	2.36	13.34	7.44	2.36	14.60	7.56	–	–	–	93
K403	2.36	13.77	8.66	.91	14.57	9.06	–	–	–	–	–	–	–	–	–	100
K513	–	–	–	.59	12.68	6.77	.59	13.15	6.85	.59	14.41	6.97	–	–	–	106
K514	–	–	–	.59	14.37	8.46	–	–	–	–	–	–	–	–	–	109
K613	–	–	–	.71	14.21	7.52	.71	14.68	7.60	.71	15.94	7.72	.71	11.48	8.27	170
K614	–	–	–	.71	15.90	9.21	–	–	–	–	–	–	–	–	–	177
K713	–	–	–	–	–	–	.79	15.98	8.70	.79	17.24	8.82	.79	12.54	9.33	221
K714	–	–	–	.79	17.24	10.35	.79	18.42	11.14	–	–	–	–	–	–	234
K813	–	–	–	–	–	–	.94	17.79	9.72	.94	19.01	9.80	.94	13.52	10.31	309
K814	–	–	–	–	–	–	.94	20.20	12.13	–	–	–	–	–	–	331

Part No. Example

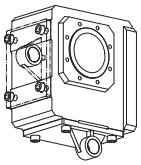
Unit with TriAdapt® Motor Adapter
1 3/8" Bore Double Bushing
K402WG0560 MT20
WFB4–106

Table No. 6 "WFB" Double Side Bushings – Inches

	Stock Bores Sizes — Inches											
Unit	1 7/16	1 1/2	1 5/8	1 11/16	1 3/4	1 7/8	1 15/16	2	2 3/16	2 3/8	2 7/16	2 3/4
K5	WFB5-107	WFB5-108	WFB5-110	WFB5-111	WFB5-112	WFB5-114	WFB5-115	WFB5-200	–	–	–	–
K6	WFB6-107	WFB6-108	WFB6-110	WFB6-111	WFB6-112	–	WFB6-115	WFB6-200	WFB6-203	–	–	–
K7	–	–	–	–	–	–	WFB7-115	WFB7-200	WFB7-203	WFB7-206	–	–
K8	–	–	–	–	–	–	–	–	WFB8-203	WFB8-206	WFB7-207	WFB8-212

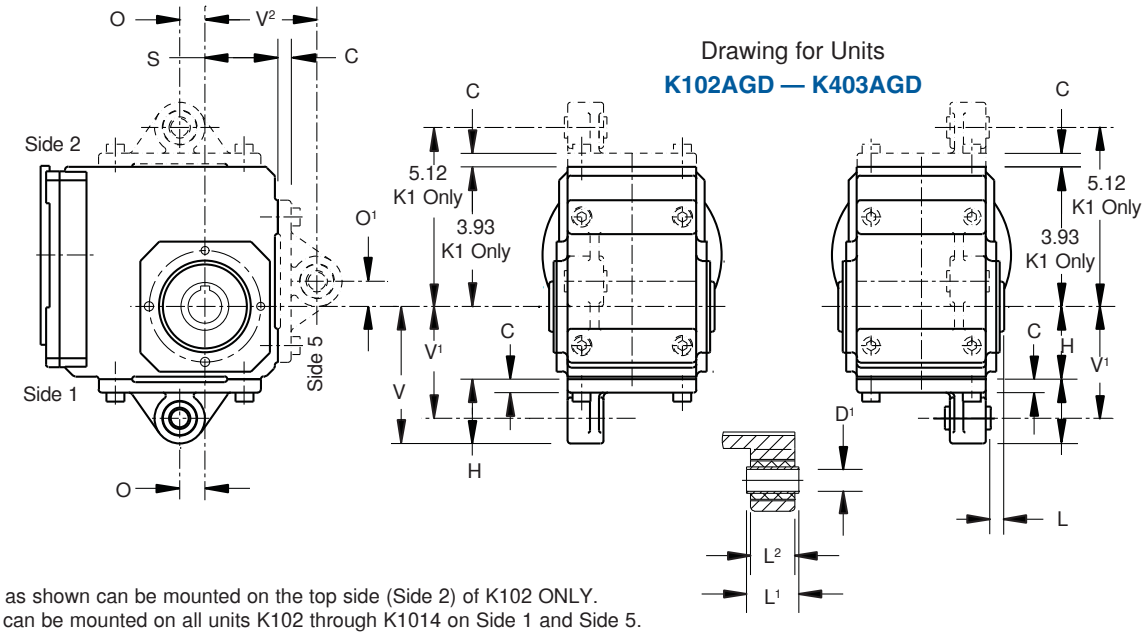
NOTES: A complete bushing kit includes the locking ring assembly, tapered cone, support ring, and all hardware to mount the kit into the reducer. The WFB1-100 bushing does not have a tapered cone.

See web site for drawings.



ServoFit® "K" Series–Helical/Bevel Torque Arm Bracket Dimensional Data

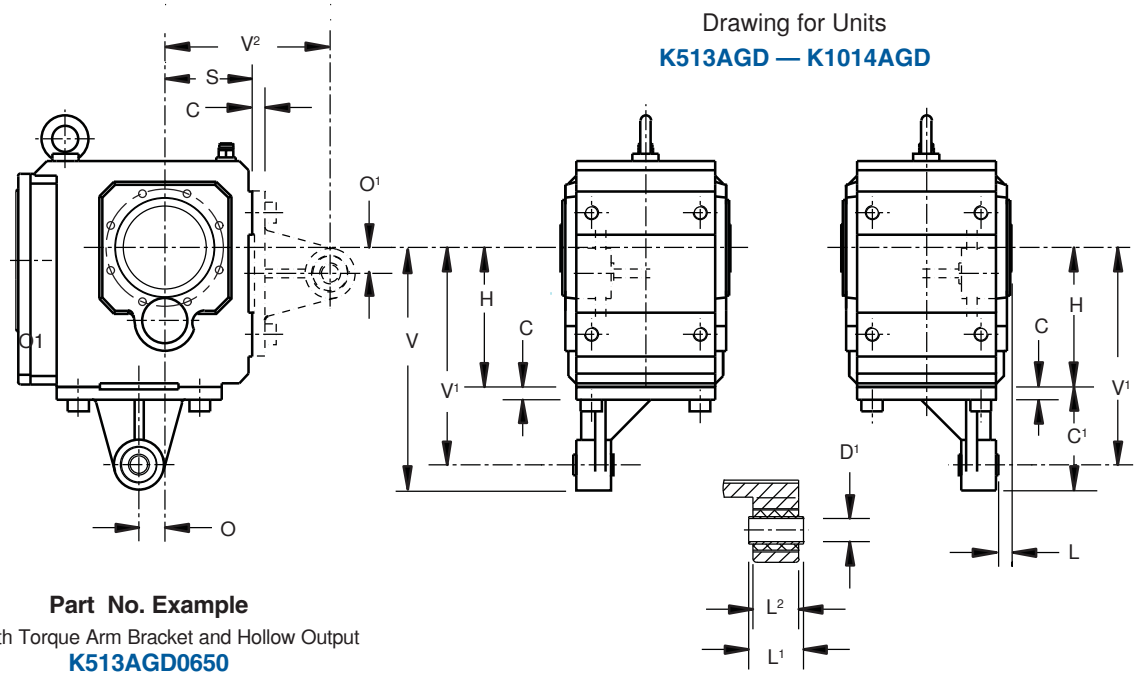
(Torque arm supplied by others.)



The bracket as shown can be mounted on the top side (Side 2) of K102 ONLY.
All brackets can be mounted on all units K102 through K1014 on Side 1 and Side 5.

Table No. 1 **"K" Series — Torque Arm Bracket Dimensions (Inches)**

Base Module	C	C¹	D¹ H9		H	L	L¹	L²	O	O¹	S	V	V¹	V²
K102	.39	2.03	.47	+0.017/-0.000	2.36	.51	1.10	.94	.59	.59	2.36	4.39	3.54	3.54
K202/K203	.47	2.26	.63	+0.017/-0.000	2.56	.53	1.50	1.26	.89	.89	2.56	4.82	3.93	3.93
K302/K303	.47	2.66	.63	+0.017/-0.000	2.95	.47	1.50	1.26	.98	.98	2.95	5.61	4.72	4.72
K402/K403	.55	3.46	.79	+0.020/-0.000	3.54	.67	1.81	1.57	1.08	1.08	3.54	7.00	5.91	5.91
K513/K514	.59	4.68	.79	+0.020/-0.000	6.30	.67	1.81	1.57	1.18	1.18	3.93	10.98	9.84	7.48
K613/K614	.59	3.50	.79	+0.020/-0.000	7.48	.81	1.81	1.57	1.18	1.18	4.72	10.98	9.84	7.09
K713/K714	.67	4.80	.79	+0.020/-0.000	8.35	.91	2.76	2.52	1.38	1.38	4.92	13.15	11.81	8.39
K813/K814	.67	4.77	.94	+0.020/-0.000	10.43	1.02	4.53	4.02	1.77	1.77	5.71	15.20	13.78	9.06
K913/K914	.79	6.80	.94	+0.020/-0.000	12.40	1.02	4.53	4.02	1.77	1.77	7.09	19.20	17.72	12.40
K1013/1014	1.65	9.25	1.57	+0.024/-0.000	14.76	.24	4.88	4.65	2.36	2.17	8.86	24.01	21.65	15.75



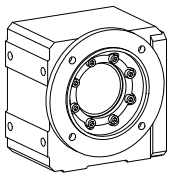
Part No. Example

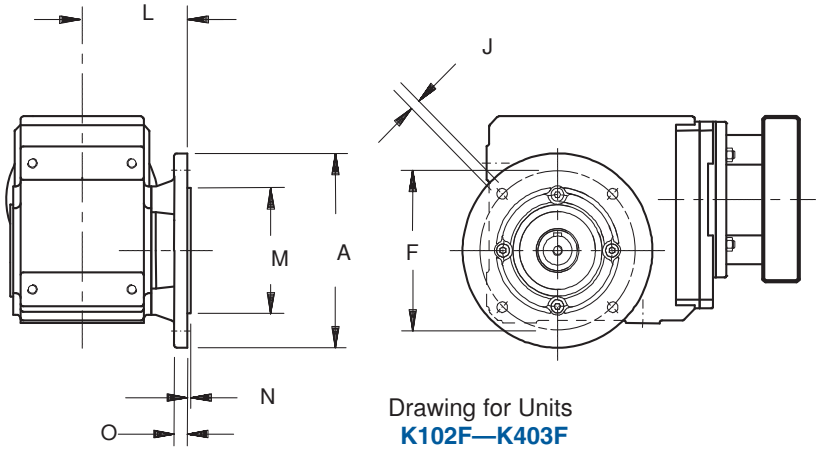
Unit with Torque Arm Bracket and Hollow Output

K513AGD0650

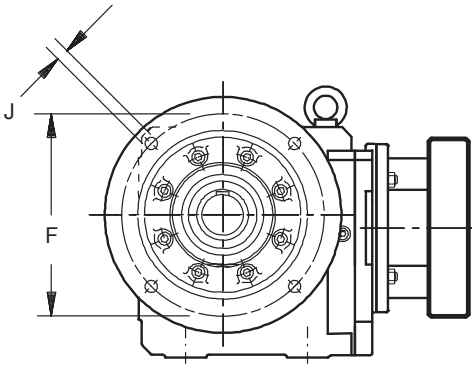
See web site for drawings.

ServoFit® "K" Series–Helical/Bevel Optional Round Flange Sizes Dimensional Data

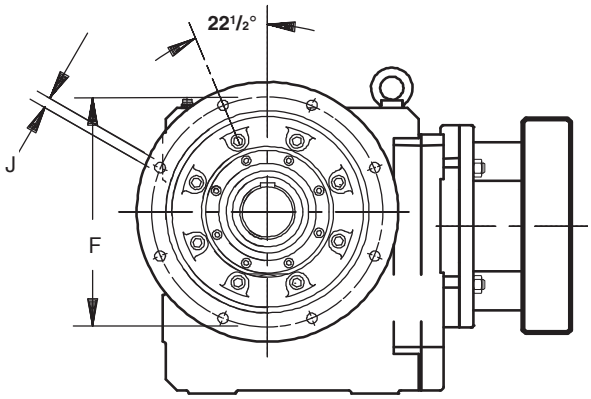




Drawing for Units
K102F—K403F



Drawing for Units
K513F—K814F



Drawing for Units
K913-K1014F

Table No. 1 "K" Series – Optional Flange Dimensions (Inches)

Base Module	Flange Designation	A	F	J	L	M	N	O
K102	140	5.51	4.53	.35	3.35	3.740 +0.001/-0.0004	.12	.39
	160 *	6.30	5.12	.35	3.35	4.331 +0.001/-0.0004	.14	.39
K202/K203	160	6.30	5.12	.35	3.90	4.331 +0.001/-0.0004	.14	.47
	200 *	7.87	6.50	.43	3.90	5.118 +0.001/-0.0004	.14	.47
K302/K303	160	6.30	5.12	.35	4.37	4.331 +0.001/-0.0004	.14	.55
	200 *	7.87	6.50	.43	4.37	5.118 +0.001/-0.0004	.14	.55
	250	9.84	8.46	.55	4.37	7.087 +0.001/-0.0004	.14	.55
K402/K403	**250** *	9.84	8.46	.55	4.98	7.087 +0.001/-0.0004	.16	.59
K513/K514	**250** *	9.84	8.46	.55	5.20	7.087 +0.001/-0.0004	.16	.59
K613/K614	**300** *	11.81	10.43	.55	5.35	9.055 +0.001/-0.0005	.16	.67
K713/K714	**350** *	13.78	11.81	.71	6.18	9.843 +0.000/-0.001	.20	.71
K813/K814	350	13.78	11.81	.71	7.32	9.843 +0.000/-0.001	.20	.79
	400 *	15.75	13.78	.71	7.32	11.811 +0.000/-0.001	.20	.79
	450	17.72	15.75	.71	7.32	13.781 +0.000/-0.002	.20	.79
K913/K914	**450** *	17.72	15.75	.71	8.46	13.780 +0.000/-0.002	.20	.91
	550	21.65	19.69	.71	8.46	17.717 +0.000/-0.002	.20	.91
K1013/K1014	**550**	21.65	19.69	.71	10.08	17.717 +0.000/-0.002	.20	.98

* This is the standard flange diameter. For other diameters, specify at the time of ordering.

See web site for drawings.

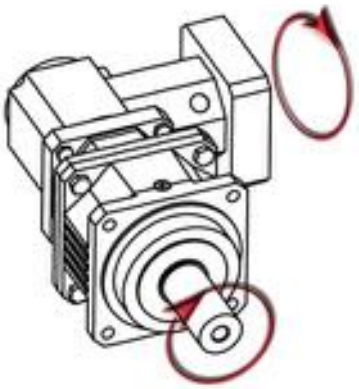


ServoFit® Gearhead
Direction of Rotation

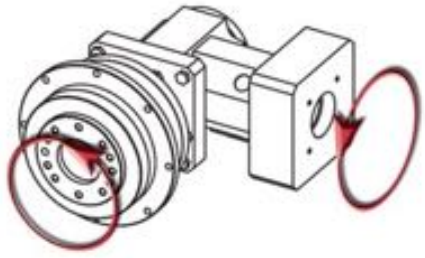
P221KX301 – P521KX501
P222KX301 – P522KX401



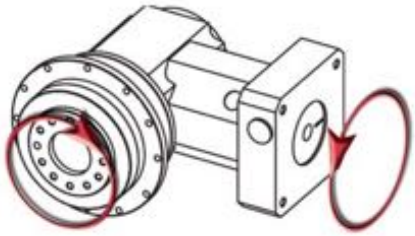
P721KX701 – P821KX801
P722KX501 – P822KX701



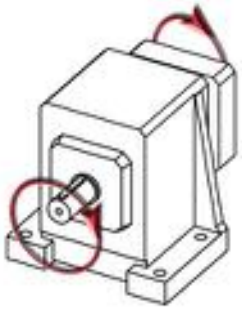
PH321KX3 – PH521KX5
PH322KX3 – PH522KX4



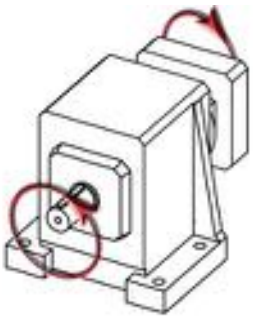
PH721KX7 – PH821KX8
PH722KX5 – PH1012KX8



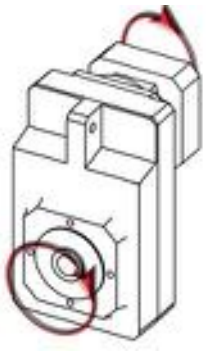
"C" Series – 2 Stage
C002 through C812



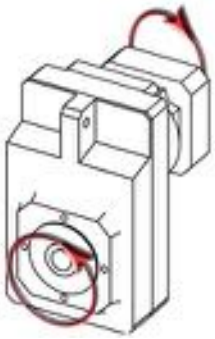
"C" Series – 3 Stage
C103 through C913



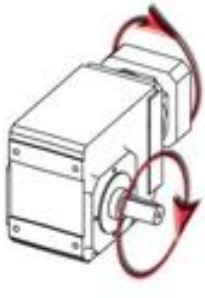
"F" Series – 2 Stage
F102 through F602



"F" Series – 3 Stage
F203 through F603



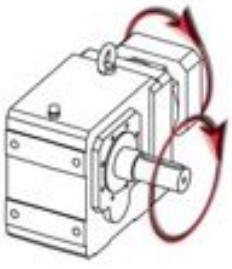
"K" Series – 2 Stage
K102 through K402



"K" Series – 3 Stage
K203 through K403



"K" Series – 3 Stage
K513 through K913



"K" Series – 4 Stage
K514 through K1014



See web site for drawings.

ServoFit® Gearhead
Motor Plate Specifications



STOBER ServoFit Gearheads will fit the motor of your choice by assembling the correct motor mounting plate between the motor and the gearhead. When ordering a gearhead, specify the motor manufacturer and part number, provide the motor drawing with dimensions, or specify the motor mounting dimensions. The motor plate thickness (L^9) dimension will be determined by the motor shaft length. The minimum motor plate thickness is shown below. For a precise dimension on a specific motor, contact STOBER Technical Support.

The following dimensions are required to provide the correct motor mounting plate:

1. D^6 Motor Shaft Diameter (If an adapter bushing is required it will be supplied with the motor plate.)
2. D^7 Pilot Diameter
3. D^8 Bolt Circle Diameter
4. D^9 Bolt Diameter
5. L^{11} Motor Shaft Length
6. L^{12} Pilot Length
7. L^{14} Square Flange (Optional—Motor plate will typically be made to match.)

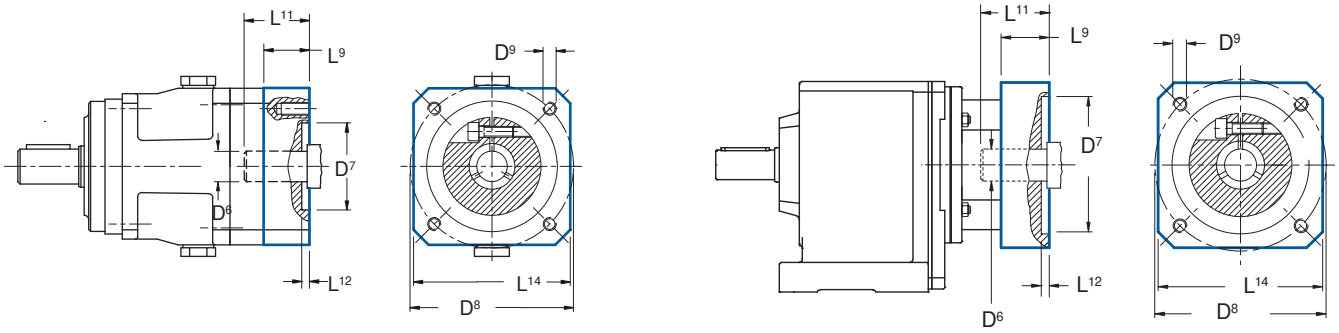


Table No. 1 **Motor Plate Thickness - Minimum**

Unit								Motor Shaft D^6 Max.	Motor Plate L^9 Min.	
P	PA	PKX	PH	PHA	PHKX	PE	C, F, K	mm	mm	ins.
P221/222 P322	PA322		PH322	PHA322						
P221L P222L P321 P322L P422	PA321 PA422	P321KX3 P422KX3	PH321 PH322L PH422	PHA321 PHA422	PH321KX3 PH322KX3 PH422KX3			19	18	.71
P321L P421 P422L P522	PA421 PA522	P421KX4 P522KX4	PH321L PH421 PH422L PH522	PHA421 PHA522	PH421KX4 PH522KX4			24	21	.83
P421L P521 P522L P722	PA521 PA722	P521KX5 P722KX5	PH421L PH521 PH522L PH722 PH924	PHA521 PHA722 PHA924	PH521KX5 PH722KX5			32	24	.95
P521L P721 P722L P822	PA721 PA822	P721KX7 P822KX7	PH521L PH721 PH722L PH822 PH923 PH1024	PHA721 PHA822 PHA923 PHA1024	PH721KX7 PH822KX7			38	25	.98
P721L P821 P822L P922	PA821	P821KX8	PH821 PH912 PH1012	PHA821 PHA912 PHA1012 PHA1023	PH821KX8 PH912KX8			48	33	1.3
P921 P922L								60	43	1.69
						PE201/PE202		11	18	.71
						PE301/PE302		14	20	.79
						PE401/PE402		19	30	1.2
						PE501/PE502		24	33	1.3
							MT10	19	21	.83
							MT20	24	24	.95
							MT30	38	25	.98
							MT40	48	33	1.30
							MT50	60	43	1.69



See web site for drawings.



ServoFit® Gearhead Motor Mounting Instructions

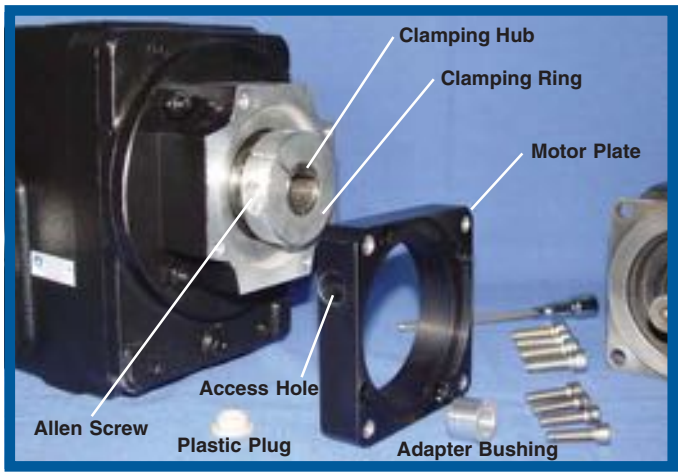
General Information

Servo motors are mounted to ServoFit® gearheads by using a TriAdapt® motor adapter with a clamp coupling or the FlexiAdapt® motor adapter with a bellows shaped thermal expansion feature. These patented adapters require no key but uses a friction locking triple split collet to clamp the shaft. A split bushing is included when the motor shaft is smaller than the input bore in the gearhead. The coupling operates free of backlash and, if installed correctly, requires no maintenance.

Tolerances for the motor must be ISO j6 on the pilot diameter and ISO k6 on the motor shaft, see Table No. 1. The motor shaft does not require a key but shaft runout, pilot concentricity and perpendicularity should meet DIN standard 42955-N when possible.

Important: Clean the motor shaft with degreaser to remove any film of oil or grease.

Parts for ServoFit Modular System



Parts for ServoFit Precision Planetary Gearheads

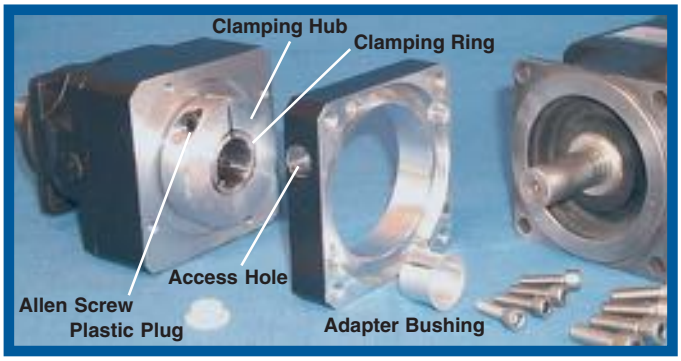


Table No. 1 Tolerances for Motors

k6 - Shaft Diameter	Metric (µm)	Imperial (ins.)
over 6 - 10	+10 / +1	+.00039 / +.00004
over 10 - 18	+12 / +1	+.00047 / +.00004
over 18 - 30	+15 / +2	+.00059 / +.00008
over 30 - 50	+18 / +2	+.0007 / +.00008
j6 - Pilot Diameter	Metric (µm)	Imperial (ins.)
over 10 - 18	+8 / -3	+.0003 / -.00012
over 18 - 30	+9 / -4	+.00035 / -.00016
over 30 - 50	+11 / -5	+.0004 / -.0002
over 50 - 80	+12 / -7	+.00047 / -.00027
over 80 - 120	+13 / -9	+.0005 / -.00035
over 120 - 180	+14 / -11	+.00055 / -.0004
over 180 - 250	+16 / -13	+.0006 / -.0005
over 250 - 315	+16 / -16	+.0006 / -.0006
over 315 - 400	+18 / -18	+.0007 / -.0007

Table No. 2 Capscrew Tightening Torque

Unit	Allen Wrench Size	Tightening Torque Nm.	Tightening Torque in. lbs.
P221, P222, P322	3	3	26.6
P221L, P222L, P321, P322L, P422	5	10	88.5
P321L, P421, P422L, P522	6	25	221.3
P421L, P521, P522L, P722	6	25	221.3
P521L, P721, P722L, P822	8	45	398.3
P721L, P821, P822L, P922	10	60	531
P821L, P921, P922L	14	210	1,858.5
PA322	3	4.5	39.8
PA321, PA422	4	9	35.4
PA321L, PA421, PA522	5	16	141.6
PA421L, PA521, PA522L, PA722	6	40	354.0
PA521L, PA721, PA722L, PA822	8	75	663.8
PA821, PA822L	10	130	1,150.5
P321KX3, P422KX3	4	10	88.5
P421KX4, P521KX5, P522KX4, P722KX5	5	14	123.9
P721KX7, P822KX7	8	45	398.3
P821KX8, P922KX8	10	60	531
PH322	3	3	26.6
PH321, PH322L, PH422	5	10	88.5
PH321L, PH421, PH422L, PH522,	6	25	221.25
PH421L, PH521, PH522L, PH722	6	25	221.3
PH521L, PH721, PH722L, PH822, PH923	8	45	398.3
PH821, PH912, PH1012, PH1023	10	60	531
PHA322	3	4.5	39.8
PHA321, PHA422	4	9	35.4
PHA321L, PHA421, PHA522	5	16	141.6
PHA421L, PHA521, PHA722	6	40	354.0
PHA521L, PHA721, PHA822, PHA923	8	75	663.8
PHA821, PHA1012, PHA1023	10	130	1,150.5
PH321KX3, PH422KX3	4	10	88.5
PH421KX4, PH521KX5	5	14	123.9
PH522KX4, PH722KX5	5	14	123.9
PH721KX7, PH822KX7	8	45	398.3
PH821KX8, PH912KX8	10	60	531
PE2	4	10	88.5
PE3	5	17	150.5
PE4	6	42	371.7
PE5	8	83	734.6
ServoFit Gearheads – "C", "F", or "K"			
MT10	5	10	88.5
MT20	6	25	221.3
MT30	8	45	398.3
MT40	10	60	531
MT50	14	210	1,858.5

See web site for drawings.

ServoFit® Gearhead
Motor Mounting Instructions



STEP 1. Remove the access hole plug.

Carefully remove the plastic plug from the access hole in the motor plate.

For new installations, the plastic plug, wrench, instructions, and bushing, when required, are contained in a plastic bag included in the shipping carton.



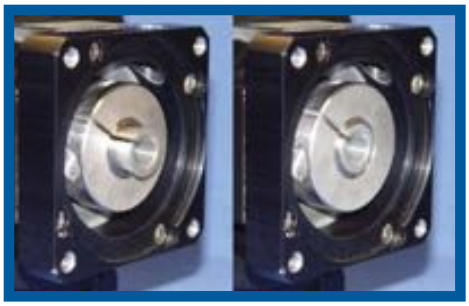
STEP 2. Align screw with access hole.



Visually align the access hole with the Allen screw in the clamping ring by turning the gearhead output shaft or the input coupling. (Shown with wrench for illustration purposes.)

STEP 3. Install bushing (when applicable).

If an adapter bushing is needed, degrease the bushing inside and outside. Align the slot in the adapter bushing with the slot in the coupling hub. Slide the bushing into the input bore until the collar of the bushing touches the shaft end.



STEP 4. Carefully mount the motor.

Place the gearhead (with the bushing installed where necessary) onto the motor shaft. (If there is a keyway in the motor shaft, align the slot in the clamping hub at 180° to the keyway.) Support the gearhead while sliding it onto the motor shaft.



IT IS VERY IMPORTANT THAT THE GEARHEAD IS NOT FORCED ONTO THE SHAFT AND THE MOTOR IS CONCENTRIC WITH THE GEARHEAD COUPLING.

STEP 5. Bolt the motor to the motor plate.

Bolt the motor flange to the gearhead motor plate.

Tighten the motor bolts to the recommended tightening torque shown in Table No. 2.



STEP 6. Tighten the TriAdapt coupling screw.

With a torque wrench, tighten the Allen screw on the coupling to the recommended torque shown in Table No. 2. A torque wrench extension is provided with each gearhead. If there are two (2) screws, be sure to tighten them equally.



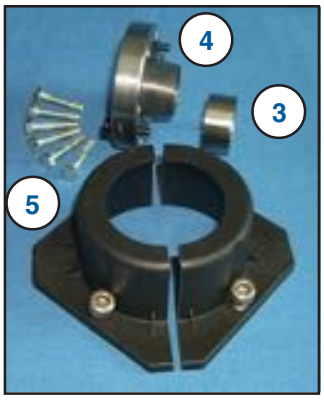
STEP 7. Re-insert the plastic plug.



See web site for drawings.

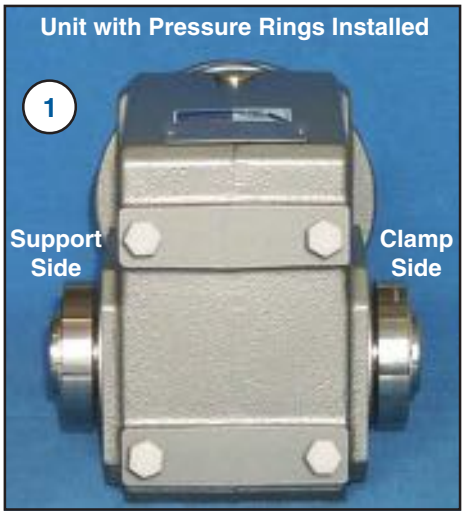


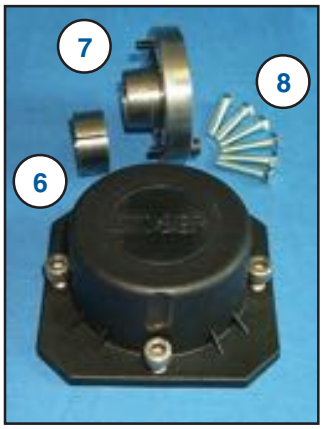
"K" Series – ServoFit® Modular System
"WFB" Bushing Installation



Support Side Bushing Components

The Support Side is the bushing with the coating on the cone. Do NOT use cleaner on the coated cone.





Clamp Side Bushing Components

Support Side Installation

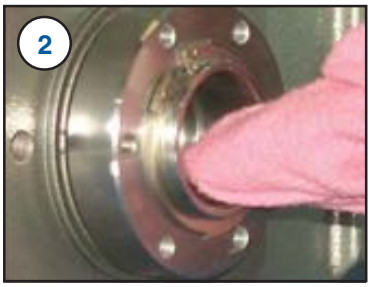


K1 units do not have a tapered cone.

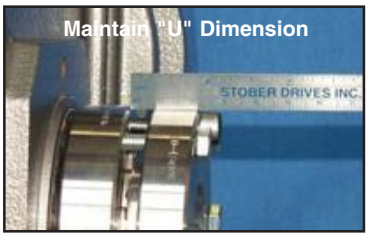


Install the Flanged Cone Assembly (4) with it's slot opposite the slot in the tapered cone (3).





Be sure the inside of the quill is free of grease and oil before installing the tapered cones.



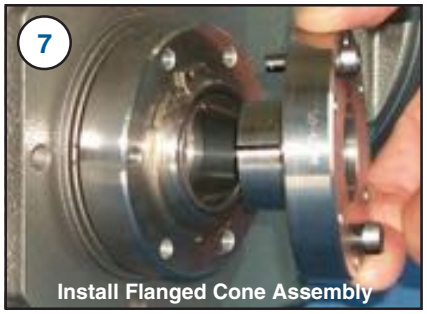
The "U" distance (between the rings) determined by the spacer bolts (see Table 1) must be maintained throughout assembly of the bushing and mounting onto the shaft. Therefore DO NOT tighten the capscrews or remove the spacer bolts until the unit is mounted on the shaft.



Clamp Side Installation



K1 units do not have a tapered cone.



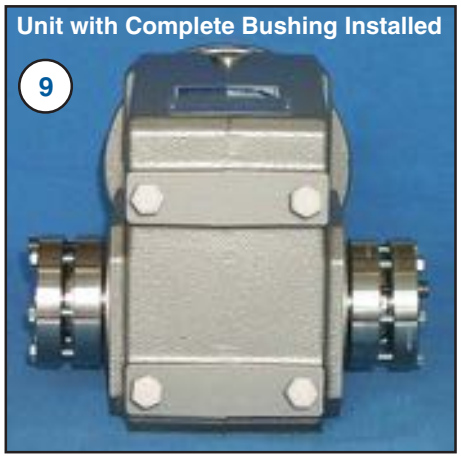
Install the Flanged Cone Assembly (7) with it's slot opposite the slot in the tapered cone (6).



See web site for drawings.

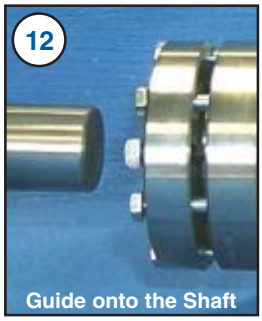
"K" Series – ServoFit® Modular System
"WFB" Bushing Installation











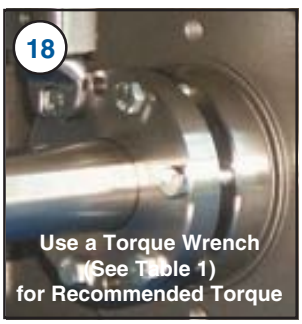




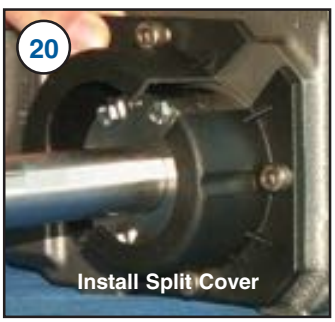












Tighten all capscrews to the torque shown in Table 1. Use a torque wrench. The tightening should be done gradually in a rotating sequence and will require more than one rotation.

After two hours (minimum) running time, check capscrews and retighten, if necessary.



Table No. 1

Base Module	Capscrews		Tightening Torque		U		Spacer Bolts
	Qty.	Size x Length	Nm.	in. lbs.	mm	ins.	
K102	6	M6x25 mm	10	89	5	.20	M6x20mm
K202/K203	6	M6x30 mm	10	89	5	.20	M6x20mm
K302/K303	8	M6x30 mm	10	89	5	.20	M6x20mm
K402/K403	8	M8x30 mm	25	221	6	.24	M8x20mm
K513/K514	8	M8x30 mm	25	221	7	.28	M8x25mm
K613/K614	8	M10x35 mm	49	434	8.5	.33	M10x25mm
K713/K714	8	M10x40 mm	49	434	5.5	.22	M10x25mm
K813/K814	8	M12x40 mm	85	752	7	.28	M12x45mm

See web site for drawings.



ServoFit® Modular System
Wobble Free Bushing Features

"No Key and Wobble Free"

The STOBER "Wobble Free" bushing is a unique patented[1] stainless steel system which can be supplied on a single side or double sides. These bushings can be mounted in the "F" Series and "K" Series ServoFit reducers. Each case size can be provided with a variety of bushing bore sizes. The unit is selected based on horsepower or torque rating, output speed or ratio, and the shaft size of the driven equipment.

Some special features of the bushing system are:

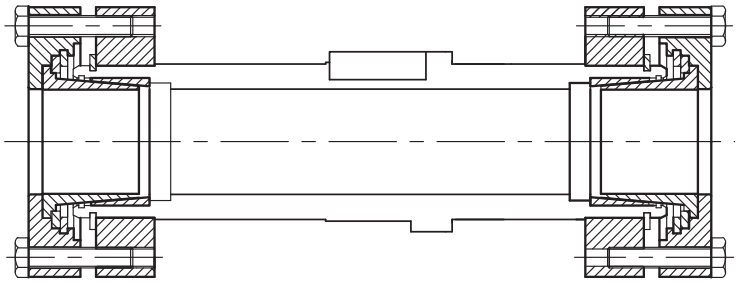
- All quills and bushing parts are high tensile stainless steel — providing the additional benefit of corrosion resistance.
- Featuring a distinct support side and a clamp side, the dual tapered cones will overcome a wide range of tolerances normally found with standard shaft materials. There is no shaft key necessary.
- All hardware is stainless steel or nickel plated.
- Units sizes K102 through K814 can be supplied with output covers on one or both sides which protect the seals and also cover the rotating bushing. F102 through F603 can only have a cover mounted on Side 5. The closed cover has an O-ring for added protection.
- Wobble Free — tapered cones in conjunction with a support ring or support side bushing prevent the "rocking" of the reducer on the shaft, common with many bushing designs.
- The reducer output bore can be changed any time by changing the bushing kit.

Important: A $^{1}/_{32}$ x 45° chamfer minimum is recommended for the shaft end.

The bushing will accept a shaft with a tolerance of +.000/-.005 inches.

Detailed instructions for mounting the bushing are included with each bushing kit.

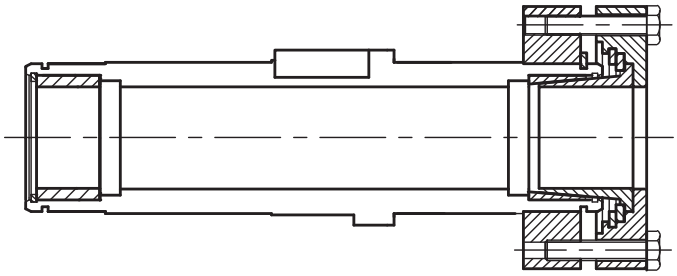
Double Sided Bushing



Support Side **Clamp Side**

This unique design allows the unit to be mounted on the shaft from either side of the reducer by reversing the clamp side and support side bushings. The clamp side is determined by the customer but is usually the easily accessible outside bushing.
The double sided bushing is not installed into the unit at assembly, but with easy-to-follow installation instructions, the unit and bushing can be mounted on the machinery quickly — without any special tools.

Single Sided Bushing



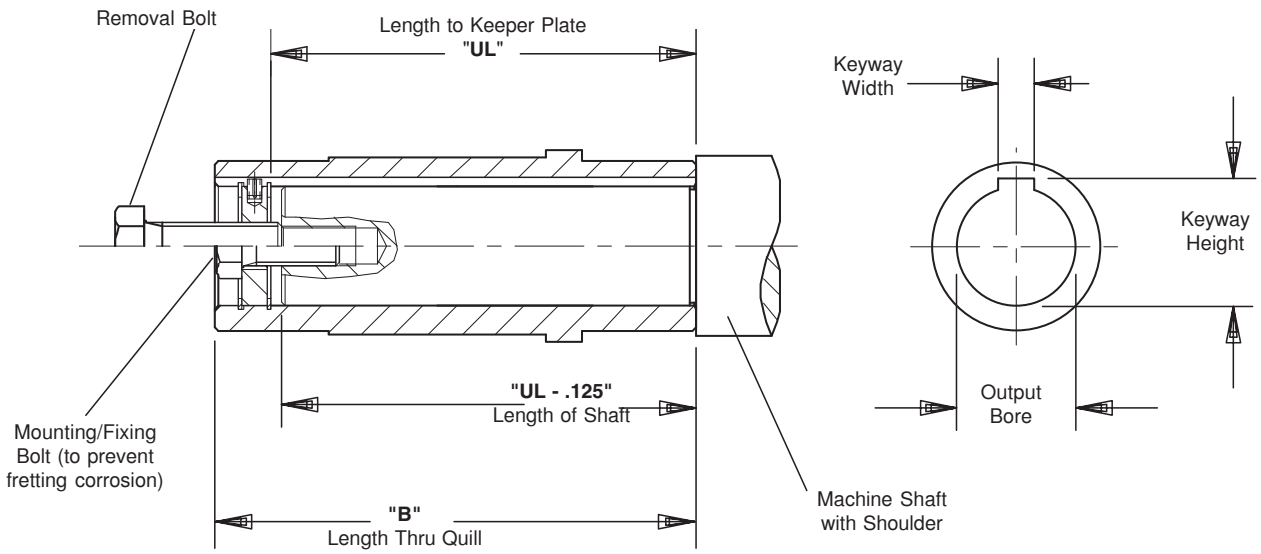
Support Side **Clamp Side**

The single sided bushing is assembled at the time of the order. The bushing side extension must be specified by the customer before assembly. The bushing is installed into the unit for shipping and is not interchangeable once the unit is assembled.

[1] U.S. Patent Number 5,496,127

ServoFit® Modular System
Installation of Hollow Output





Mounting Hollow Output Reducers

A STOBER hollow output reducer can be mounted from either side. The tolerance for the hollow bore is shown in the table below and the shaft should be toleranced to fit this bore accordingly.

A keeper plate inside the quill is provided with each unit to prevent axial movement. This keeper plate is held in place with snap rings and can be easily removed for location on either end. A spring pin in the keeper plate mounts into the keyway of the quill and prevents rotation. The keeper plate center hole is tapped to fit the removal bolt.

Before installation, brush the inside of the quill with rust inhibiting grease. When mounting the unit onto the shaft, avoid hammering as this may damage the bearings. Do not mount the reducer dry as removal may be impossible.

The drawing above shows a mounting or fixing bolt and a removal bolt. The mounting/fixing bolt should be smaller in size than the removal bolt. See Table No. 2.

To use the keeper plate with a mounting/fixing bolt, drill and tap the end of the shaft that will be mounted into the reducer. Insert the mounting/fixing bolt through the keeper plate and thread into the shaft end. The machine shaft length should not be longer than the “UL” dimension. A shaft length of "UL minus .125" will allow the shaft shoulder to pull against the face of the quill of the reducer.

Removal of Hollow Output Reducers

To dismantle the unit from the shaft, remove the mounting bolt. Thread the removal bolt into the keeper plate to press against the shaft and loosen the shaft from the unit. Removal of the reducer will be easier if the quill is greased before installation.

Table No. 1
Hollow Shaft — "U" Dimension

Bore Range	Tolerance
.39 — .71	+.0007 / -.0000
.71 — 1.18	+.0008 / -.0000
1.18 — 1.97	+.0010 / -.0000
1.97 — 3.15	+.0012 / -.0000
3.15 Up	+.0014 / -.0000

Table No. 2 "UL" Dimension and Removal Bolt Size

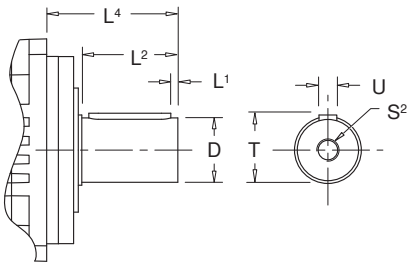
Unit	Bore	UL	Bolt	Unit	Bore	UL	Bolt
F1	.750	2.67	3/8-16 NC	K1	1.000	3.86	1/2-13 NC
F2	1.000	3.62	1/2-13 NC	K2	1.187	4.78	1/2-13 NC
F3	1.250	4.06	1/2-13 NC	K3	1.375	4.92	5/8-11 NC
F4	1.500	4.49	3/4-10 NC	K4	1.500	6.18	3/4-10 NC
F6	2.000	5.63	3/4-10 NC	K5	2.000	6.46	3/4-10 NC
				K6	2.000	7.05	3/4-10 NC
				K7	2.375	8.43	1-8 NC
				K8	2.750	10.35	1-8 NC
				K9	3.250	12.32	1-8 NC
				K10	4.000	14.25	1 1/4-7 NC

See web site for drawings.

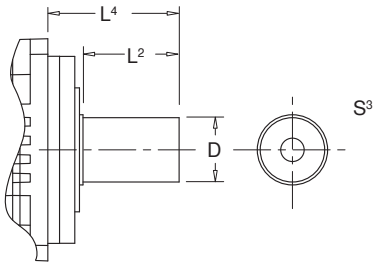


"P and PA" Series
ServoFit® Precision Planetary Gearhead
Output Shaft Options

"P" – Shaft with Key



"G" – Shaft without Key



"V" – Splined Shaft

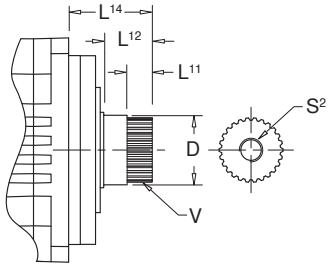


Table No. 1 **Output Shaft Options**

P – Shaft with Key

Unit No.	D k6 mm		L1 mm	L1 inches	L2 mm	L2 inches	L4 mm	L4 inches	S2 (1)	T mm	T inches	U (2) WDxHTxLG
P2	12	+.012/+.001	2	.08	22	.87	36	1.42	M4	13.5	.53	A4x4x18
P3/PA3	16	+.012/+.001	2	.08	28	1.10	48	1.89	M5	18	.71	A5x5x22
P4/PA4	22	+.015/+.002	3	.11	36	1.42	56	2.20	M8	24.5	.96	A6x6x28
P5/PA5	32	+.018/+.002	3	.11	58	2.28	88	3.46	M12	35	1.38	A10x8x50
P7/PA7	40	+.018/+.002	4	.16	82	3.23	112	4.41	M16	43	1.69	A12x8x70
P8/PA8	55	+.021/+.002	6	.24	82	3.23	112	4.41	M20	59	2.32	A16x10x70
P9	75	+.021/+.002	7	.28	105	4.13	143	5.63	M20	79.5	3.13	A20x12x90

G – Shaft without Key

Unit No.	D k6 mm		L2 mm	L2 inches	L4 mm	L4 inches	S3 (1)
P2	12	+.012/+.001	22	.87	36	1.42	R3.5x6.7
P3/PA3	16	+.012/+.001	28	1.10	48	1.89	R4x8.5
P4/PA4	22	+.015/+.002	36	1.42	56	2.20	R4x8.5
P5/PA5	32	+.018/+.002	58	2.28	88	3.46	R4x8.5
P7/PA7	40	+.018/+.002	82	3.23	112	4.41	R4x8.5
P8/PA8	55	+.021/+.002	82	3.23	112	4.41	R5x10.6
P9	75	+.021/+.002	105	4.13	143	5.63	M20

V – Splined Shaft

Unit No.	D k6 mm		L11 mm	L11 inches	L12 mm	L12 inches	L14 mm	L14 inches	S2 (1)	V (3)
P3/PA3	16	+.012/+.001	15	.59	26	1.02	46	1.81	M5	W16x.80x30x18x6m
P4/PA4	22	+.015/+.002	15	.59	26	1.02	46	1.81	M8	W22x1.25x30x16x6m
P5/PA5	32	+.018/+.002	15	.59	26	1.02	56	2.20	M12	W32x1.25x30x24x6m
P7/PA7	40	+.018/+.002	20	.79	40	1.57	70	2.76	M16	W40x2.00x30x18x6m
P8/PA8	55	+.021/+.002	21.5	.85	41.5	1.63	71.5	2.81	M20	W55x2.00x30x26x6m

(1) The center hole in shafts with keys (Option "P") are machined to DIN 332 T2 shape DR.
The center hole in shafts without keys (Option "G") are machined to DIN 332 T1.

(2) Feather keys are toleranced according to standard DIN 6885.

(3) The recommended hub tolerance is H7. Because of pitch errors due to teeth cutting, this tolerance will provide backlash free operation.
The hub should be heated to 100° C for assembly onto the splined shaft.

"P and PA" Series
ServoFit® Precision Planetary Gearhead
Output Shaft Loads



The permissible load and tilting moment values are based on an output speed of 100 RPM.
For higher speeds the following applies, where n_2 is the desired speed:

$$F_{2RX} = \frac{F_{2R}}{\sqrt[3]{\frac{n_2}{100}}} \qquad T_{2KX} = \frac{T_{2K}}{\sqrt[3]{\frac{n_2}{100}}}$$

The application input tilting moment should be determined by the following formula: $T_{2A} = \frac{F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq T_{2K}$

The hours of life (L_h) of the unit can be determined by the following formula: $L_h > 10{,}000$ hours if $T_{2K}/T_{2A} < 1.25$ and > 1.00
$L_h > 20{,}000$ hours if $T_{2K}/T_{2A} > 1.25$ and < 1.50
$L_h > 30{,}000$ hours if $T_{2K}/T_{2A} > 1.5$

All formulas shown are based on metric values.

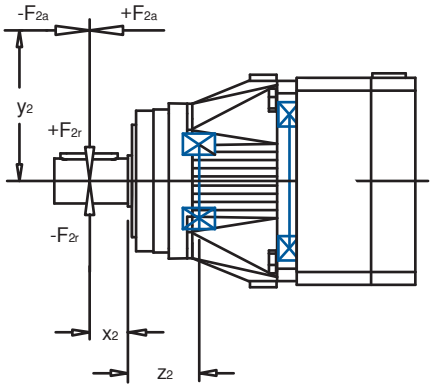
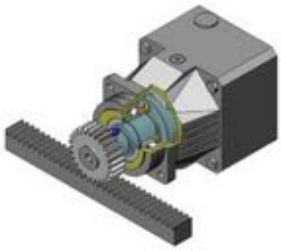


Table No. 1 Permissible Load and Tilting Moments

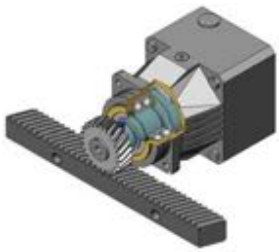
R – Output Bearing Option, Normal

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
P2	17	.669	500	112	1,200	270	34	300
P3	21	.827	1,000	225	2,500	563	88	779
P4	22	.866	1,500	337	4,000	900	160	1,416
P5	23	.906	2,300	518	6,500	1,463	338	2,708
P7	26	1.023	2,900	653	8,000	1,800	536	4,744
P8	28	1.102	4,700	1,058	13,000	2,925	897	7,938
P9	40	1.575	6,000	1,350	18,000	4,050	1,665	14,735



D – Output Bearing Option, Axially Reinforced

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
P3, PA3	24	.945	1,400	315	2,750	619	105	929
P4, PA4	25	.984	2,250	506	4,500	1,013	194	1,717
P5, PA5	29	1.142	3,500	788	7,000	1,575	406	3,593
P7, PA7	31	1.220	4,500	1,013	9,000	2,025	648	5,735
P8, PA8	35	1.378	7,500	1,688	15,000	3,375	1,140	10,089
P9	51	2.008	10,000	2,250	20,000	4,500	2,070	18,320



Z – Output Bearing Option, Radially Reinforced

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
P3	21	.83	600	135	3,000	675	105	929
P4	22	.87	1,000	225	5,000	1,125	200	1,770
P5	23	.91	1,600	360	8,000	1,800	416	3,682
P7	26	1.02	2,000	450	10,000	2,250	670	5,929
P8	28	1.10	3,600	810	18,000	4,050	1,242	10,992
P9	40	1.58	5,000	1,125	27,000	6,075	2,500	22,125



The permissible load values given are valid with the load applied to the center of the output shaft (x_2).
See Page 7 for output shaft load characteristics and typical applications.

See web site for drawings.



"P and PA" Series ServoFit® Precision Planetary Gearhead No Load Running Torque

Table No. 1 **"P" Series Input – No Load Running Torque – T_R**

Unit No.		Ratio 3	4	5	7	8	10	15	16	20	25	28	32	35	40	50	70	100
P2	in.lbs.	—	1.8	1.8	1.8	1.8	.9	—	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
	Nm.		.2	.2	.2	.2	.1		.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
P3	in.lbs.	2.7	1.8	1.8	1.8	1.8	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
	Nm.	.3	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
P4	in.lbs.	3.5	2.7	2.7	1.8	1.8	1.8	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
	Nm	.4	.3	.3	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
P5	in.lbs.	7.0	5.3	4.4	3.5	2.7	2.7	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	Nm	.8	.6	.5	.4	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2
P7	in.lbs.	8.0	6.2	5.3	4.4	3.5	3.5	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	Nm	.9	.7	.6	.5	.4	.4	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2
P8	in.lbs.	14.2	11.5	9.7	8.0	6.2	6.2	5.3	5.3	4.4	4.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Nm	1.6	1.3	1.1	.9	.7	.7	.3	.6	.5	.5	.4	.4	.4	.4	.4	.4	.4

The torque is measured with the input at 2000 RPM and an ambient temperature of 20° C.

Table No. 2 **"PA" Series Input – No Load Running Torque – T_R**

Unit No.		Ratio 3	4	5	7	8	10	15	16	20	25	28	32	35	40	50	70	100
PA3	in.lbs.	2.7	1.8	1.8	1.8	1.8	1.8	—	1.3	1.3	.9	.9	.9	.9	.9	.9	.9	.9
	Nm.	.3	.2	.2	.2	.2	.2	—	.15	.15	.1	.1	.1	.1	.1	.1	.1	.1
PA4	in.lbs.	4.4	3.5	3.5	2.7	2.7	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	Nm	.5	.4	.4	.3	.3	.3	.3	.3	.2	.15	.15	.15	.15	.15	.15	.15	.15
PA5	in.lbs.	7.0	5.3	4.4	3.5	3.5	3.5	3.5	3.5	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	Nm	.8	.6	.5	.4	.4	.4	.4	.4	.3	.3	.2	.2	.2	.2	.2	.2	.2
PA7	in.lbs.	8.0	6.2	5.3	4.4	4.4	4.4	6.2	4.4	3.5	1.8	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Nm	.9	.7	.6	.5	.5	.5	.7	.5	.4	.2	.4	.4	.4	.4	.4	.4	.4
PA8	in.lbs.	19.5	17.7	15.9	15.0	15.0	15.0	8.0	5.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	Nm	2.2	2.0	1.8	1.7	1.7	1.7	.9	.6	.5	.5	.5	.5	.5	.5	.5	.5	.5

The torque is measured with the input at 2000 RPM and an ambient temperature of 20° C.

See web site for drawings.

"PH and PHA" Series
ServoFit® Precision Planetary Gearhead
Permissable Shaft Load



The permissible load and tilting moment values are based on an output speed of 100 RPM. For higher speeds the following applies, where n_2 is the desired speed:

$$F_{2RX} = \frac{F_{2R}}{\sqrt[3]{\frac{n_2}{100}}} \qquad T_{2KX} = \frac{T_{2K}}{\sqrt[3]{\frac{n_2}{100}}}$$

The application input tilting moment should be determined by the following formula: $T_{2A} = \frac{F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq T_{2K}$

The application input tilting angle can be determined by the following formula: $\Delta\varphi = \frac{T_{2A}}{C_{2K}}$ Value is in arcminutes. C_{2K} is found on Page 30.

The hours of life (L_h) of the unit can be detemined by the following formula: $L_h > 10{,}000$ hours if $T_{2K}/T_{2A} < 1.25$
$L_h > 20{,}000$ hours if $T_{2K}/T_{2A} > 1.25$

All formulas shown are based on metric values.

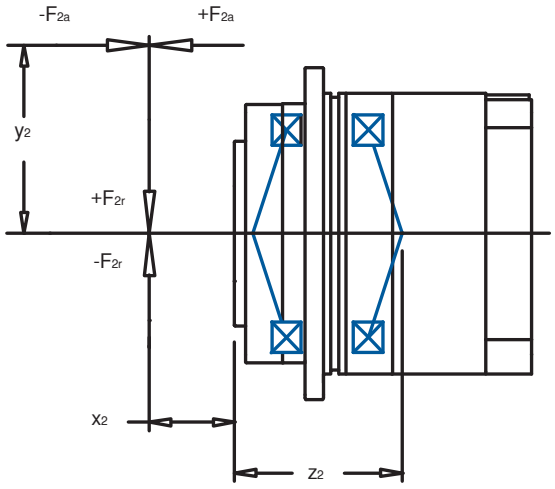


Table No. 1 "PH" and "PHA" Series – Permissible Output Load and Tilting Moments

Unit No.	z_2 mm	z_2 inches	F_{2AMAX} N	F_{2AMAX} lbs.	T_{2KMAX} Nm	T_{2KMAX} in.lbs.	C_{2K} Nm/arcmin	C_{2K} In.lbs/arcmin
PH3, PHA3	62	2.44	1,650	371	100	885	—	—
PH4, PHA4	84	3.07	2,150	484	260	2,124	160	1,416
PH5, PHA5	97	3.62	4,150	934	440	3,717	300	2,655
PH7, PHA7	88	3.31	6,150	1,384	1,500	13,275	500	4,425
PH8, PHA8	126	4.65	10,050	2,261	3,500	30,975	1,550	13,718
PH9, PHA9	140	5.51	33,000	7,425	6,500	57,525	5,500	48,675
PH10, PHA10	171	5.51	50,000	11,250	8,800	77,880	9,500	84,075

See web site for drawings.



"PE" Series
ServoFit® Planetary Gearhead
Permissable Shaft Load

The permissible load and tilting moment values are based on an output speed of 100 RPM. For higher speeds the following applies, where n_2 is the desired speed:

$$F_{2RX} = \frac{F_{2R}}{\sqrt[3]{\frac{n_2}{100}}} \qquad T_{2KX} = \frac{T_{2K}}{\sqrt[3]{\frac{n_2}{100}}}$$

The application input tilting moment should be determined by the following formula: $T_{2A} = \frac{F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq T_{2K}$

The hours of life (L_h) of the unit can be detemined by the following formula: $L_h > 10{,}000$ hours if $T_{2K}/T_{2A} < 1.25$
$L_h > 20{,}000$ hours if $T_{2K}/T_{2A} > 1.25$

All formulas shown are based on metric values.

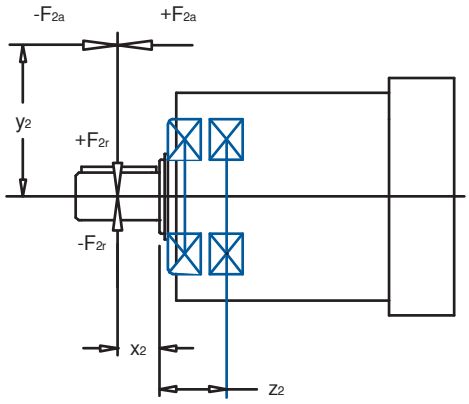


Table No. 1 "PE" Series – Permissible Load and Tilting Moments

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
PE201, PE202	20	0.79	250	56	850	191	25	221
PE301, PE302	28	1.10	412	93	1,650	371	69	610
PE401, PE402	31	1.22	650	146	2,600	585	127	1,124
PE501, PE502	41	1.61	1,200	270	4,800	1,080	336	2,974

See web site for drawings.

ServoFit® Modular System
Permissible Loads
Tilting Moment



The permissible load values given are valid with the load applied to the center of the output shaft (x_2).

The permissible load and tilting moment values are based on an output speed of 20 RPM. For higher speeds the following applies, where n_2 is the desired speed:

$$F_{2RX} = \frac{F_{2R}}{\sqrt[3]{\frac{n_2}{20}}} \qquad T_{2KX} = \frac{T_{2K}}{\sqrt[3]{\frac{n_2}{20}}}$$

The application input tilting moment should be determined by the following formula:

$$T_{2A} = \frac{F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq T_{2K}$$

All formulas shown are based on METRIC values.

Upper case letters are permissible values. Lower case letters are for existing values.

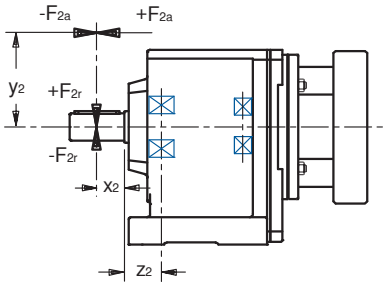


Table No. 1 Permissible Load and Tilting Moments

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
C0	20	0.79	500	112	1,900	427	80	708
C1	30	1.18	850	191	3,400	765	190	1,682
C2	30	1.18	1,050	236	4,200	945	260	2,301
C3	30	1.18	1,400	315	5,650	1,271	350	3,098
C4	35	1.38	2,400	540	9,700	2,182	750	6,638
C5	42	1.65	3,000	675	11,000	2,475	900	7,965
C6	40	1.57	4,000	900	16,000	3,600	1,500	13,275
C7	45	1.77	5,500	1,237	22,000	4,950	2,400	21,240
C8	50	1.97	7,500	1,687	30,000	6,750	3,700	32,745
C9	55	2.17	9,500	2,137	37,000	8,325	5,200	46,020

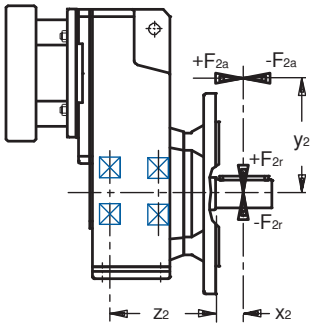


Table No. 2 Permissible Load and Tilting Moments

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
F1	93	3.66	1,100	247	4,200	945	500	4,425
F2	116	4.57	1,400	351	5,400	1,215	790	6,991
F3	131	5.16	1,900	427	7,500	1,687	1250	11,062
F4	144	5.67	2,350	528	9,250	2,081	1700	15,045
F6	170	6.69	3,100	697	12,500	2,812	2750	24,337

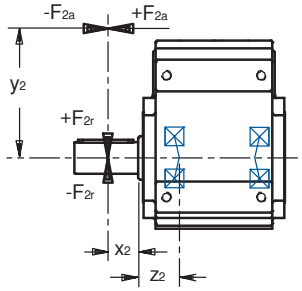


Table No. 3 Single Solid Output
Permissible Load and Tilting Moments

Unit No.	z_2 mm	z_2 inches	F_{2A} N	F_{2A} lbs.	F_{2R} N	F_{2R} lbs.	T_{2K} Nm	T_{2K} in.lbs.
K1	40	1.57	1,900	427	5,000	1,125	360	3,186
K2	42	1.65	2,100	472	6,000	1,350	430	3,805
K3	45	1.77	2,400	540	7,000	1,575	525	4,646
K4	52	2.05	3,500	787	11,200	2,520	1,050	9,292
K5	72	2.83	3,500	787	13,450	3,026	1,580	13,983
K6	72	2.83	4,000	900	16,000	3,600	1,960	17,346
K7	85	3.35	5,500	1,237	22,000	4,950	3,200	28,320
K8	60	2.36	7,250	1,631	29,000	6,525	3,800	33,630
K9	70	2.76	16,500	3,712	65,000	14,625	10,100	89,385
K10	84	3.31	25,000	5,625	80,000	18,000	15,200	134,520

For DOUBLE output shaft: F_{2R} x 0.7

Overhung Loads

Pulling forces or overhung load of pulleys, sheaves, sprockets, etc. on the reducer output shaft must not exceed the allowable limits shown in the above calculations. The overhung load shown is measured at the center of the shaft extension.

The following formula can be used to determine actual overhung load for a given drive.

$$OHL = \frac{126{,}000 \times HP \times K}{D \times RPM}$$

where

OHL = Overhung Load (lbs.)
HP = Horsepower
D = Pitch Dia. (in.) of Sprocket, Gear, Sheave, Pulley, etc.
RPM = Maximum Speed
K = 1.00 Chain Drives
1.25 Gear Drives
1.25 Gearbelt Drives
1.50 V-Belt Drives
2.50 Flat Belt Drives

No overhung load is encountered when an reducer is flange mounted and/or coupling connected to another unit. However, the shafts of all components must be accurately aligned and secured to prevent pre-loading of the bearings and premature bearing failure.

See web site for drawings.



ServoFit® Modular System Lubrication Data

All ServoFit Precision Planetary units are filled with synthetic oil and lubricated for life. The units should never be opened or the oil changed.

All ServoFit Modular System units are shipped filled with the required amount of Mobilgear 630 lubrication. In order to provide the proper lubrication quantity **the mounting position must be specified at the time the unit is ordered**.

Maintenance

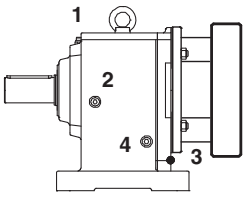
With STOBER reducers very little maintenance is required under normal operating conditions.
Unless otherwise noted breathers are provided on the following units:

C612 through C913
F602 through F603
K513 through K1014

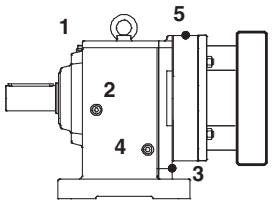
We recommend that the lubrication be changed in units supplied with breathers according to the following schedule:

Normal Operating Conditions ..... after 5000 Hours
Wet Operating Conditions ..... after 2000 Hours.

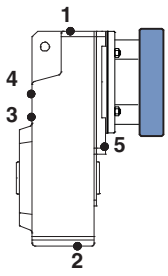
Units supplied without breathers (beverage and food packages) are lubricated for life.



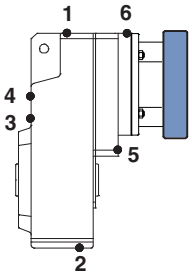
C612-C912



C613-C913



F602



F603

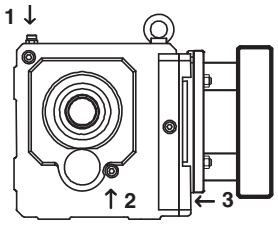
Table No. 2 Drain Plug and Vent Location

Mounting Position	1	2	2a	3	5
EL1	Vent			Drain	
EL2	Drain			Vent	
EL3		Vent	Drain		
EL4		Drain	Vent		
EL5 (C612-C912)	Drain			Vent	
EL5 (C613-C913)	Drain				Vent
EL6	Vent			Drain	

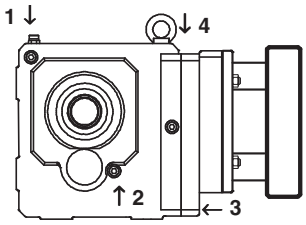
Position 2a is on the opposite side of 2.

Table No. 3 Drain Plug and Vent Location

Mounting Position	1	2	3	4	5	6
EL1	Vent	Drain				
EL2	Drain	Vent				
EL3		Drain		Vent		
EL4		Drain	Vent			
EL5 (F602)			Drain		Vent	
EL5 (F603)			Drain			Vent
EL6 (F602)			Vent		Drain	
EL6 (F603)			Vent			Drain



K513-K1013



K514-K1014

Table No. 4 Drain Plug and Vent Location

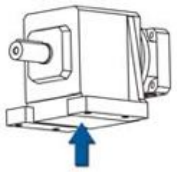
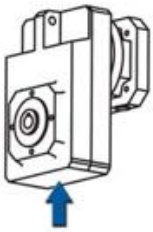
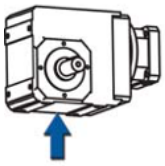
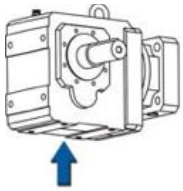
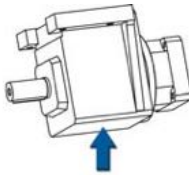
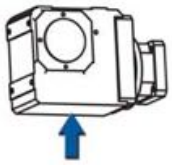
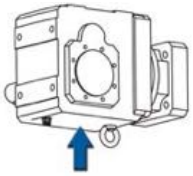
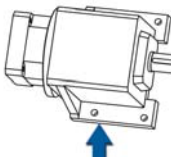
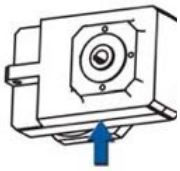
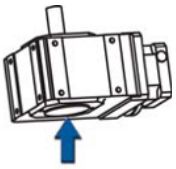
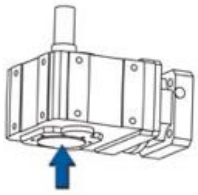
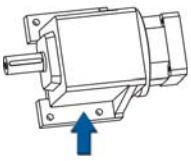
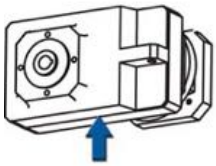
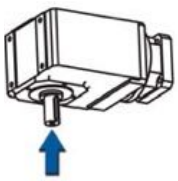
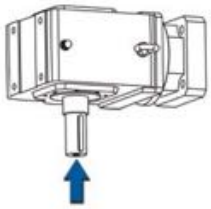
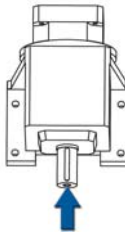
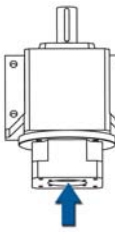
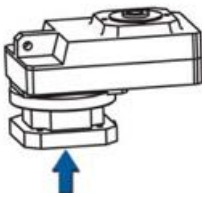
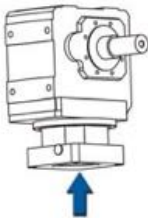
Mounting Position	1	2	2a	3	4
EL1	Vent			Drain	
EL2	Drain			Vent	
EL3		Vent	Drain		
EL4		Drain	Vent		
EL5 (K513/K1013)	Drain			Vent	
EL5 (K514/K1014)	Drain				Vent
EL6 (K513/K1013)	Vent			Drain	
EL6 (K513/K1014)	Vent				Drain

Position 2a is on the opposite side of 2.

ServoFit® Modular System
Mounting Position Specification

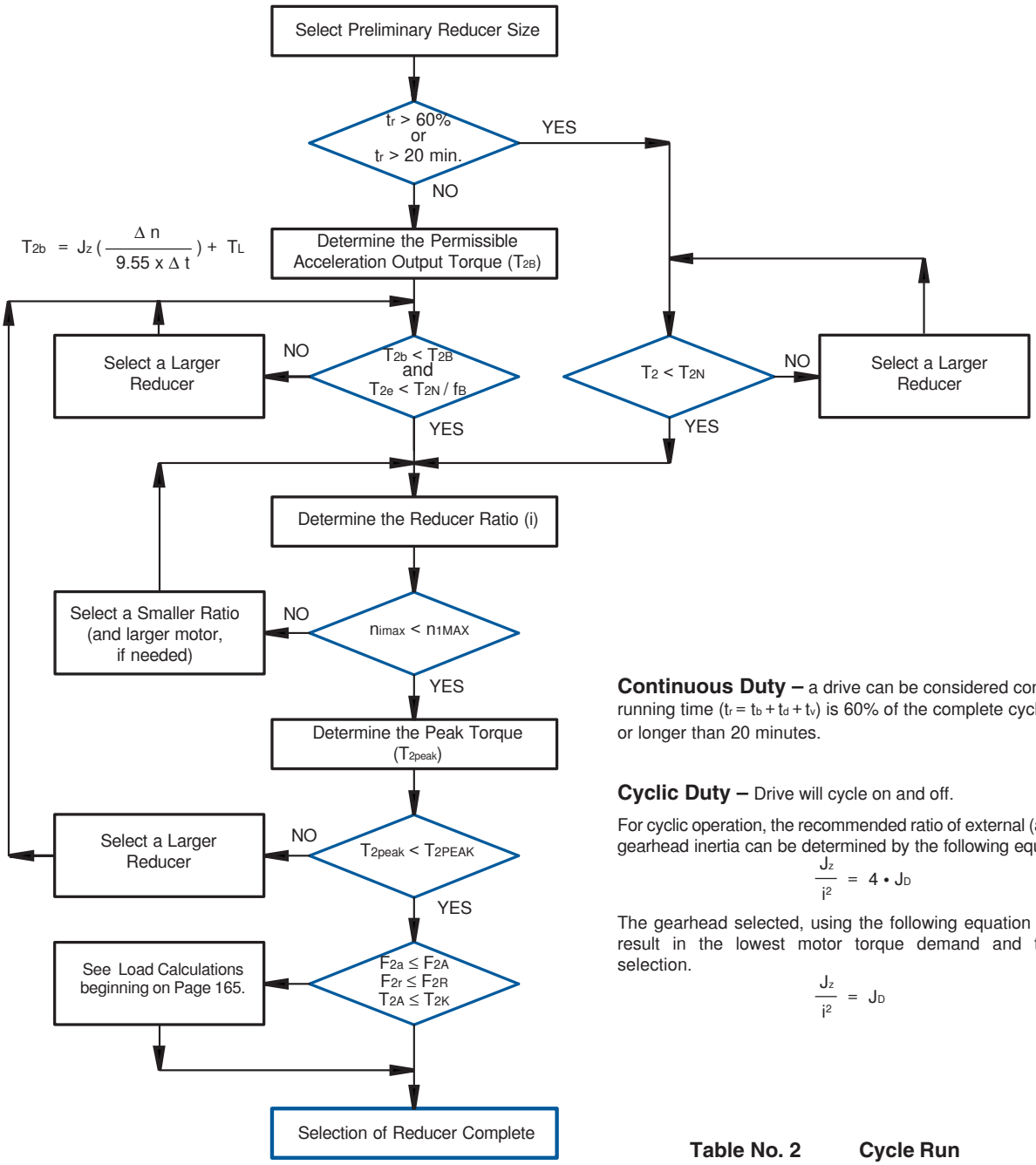


("K" Series shown with shaft on Side 4.)

	"C" Series	"F" Series	"K" Series K1-K4	"K" Series K5-K10
EL1				
EL2				
EL3				
EL4				
EL5				
EL6				

See web site for drawings.

ServoFit® Gearhead
Selection Procedures Flow Chart



Continuous Duty – a drive can be considered continuous duty if the running time ($t_r = t_b + t_d + t_v$) is 60% of the complete cycle time ($t_b+t_d+t_v+t_p$) or longer than 20 minutes.

Cyclic Duty – Drive will cycle on and off.

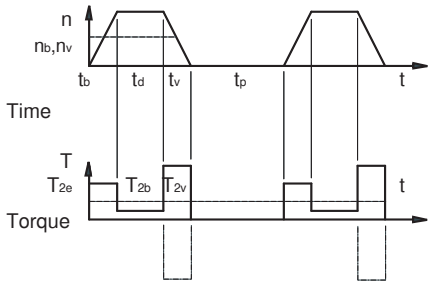
For cyclic operation, the recommended ratio of external (application) inertia to gearhead inertia can be determined by the following equation:

$$\frac{J_z}{i^2} = 4 \bullet J_D$$

The gearhead selected, using the following equation for inertia ratio, will result in the lowest motor torque demand and the optimum drive selection.

$$\frac{J_z}{i^2} = J_D$$

Table No. 2 Cycle Run



$$T_{2e} = \sqrt[3]{\frac{n_{2b} \bullet t_b \bullet T_{2b}^3 + \ldots + n_{2n} \bullet t_{2n} \bullet T_{2n}^3}{n_{2b} \bullet t_{2b} + \ldots + n_{2n} \bullet t_n}}$$

Table No. 1
"C", "F", and "K" ONLY
ServoFit Service Factor

Operating Mode	f_B
Continuous	1.0
Cyclic	1.25
Cyclic-Reversing	1.4

See web site for drawings.

ServoFit® Gearhead
Selection Procedures Formula Explanation

Table No. 3 Index of Values and Symbols

Symbol	Value			Description
	Imperial	*Multiplier*	Metric	
F_{2a}	lbs.	4.45	N	Axial Force @ Output Shaft
F_{2A}	lbs.	4.45	N	Permissible Axial Force
F_{2r}	lbs.	4.45	N	Radial Force @ Output Shaft
F_{2R}	lbs.	4.45	N	Permissible Radial Load
f_B	–	–	–	Load Factor — SMS Only
i	–	–	–	Reducer Ratio
J_D	lb-in-s^2	1.13×10^3	kgcm^2	Motor + Reducer Inertia @ Motor RPM
J_Z	lb-in-s^2	1.13×10^3	kgcm^2	Total Inertia @ Reducer RPM
n	RPM	–	min^{-1}	Speed
n_b	RPM	–	min^{-1}	Acceleration Speed
n_v	RPM	–	min^{-1}	Deceleration Speed
n_1	RPM	–	min^{-1}	Input Speed
n_2	RPM	–	min^{-1}	Reducer Output Speed
T	in.lbs.	.113	Nm	Torque
T_2	in.lbs.	.113	Nm	Application Torque
T_{2e}	in.lbs.	.113	Nm	Equivalent Torque (Average RMS Torque)
T_{2K}	in.lbs.	.113	Nm	Reducer Tilting Moment
T_L	in.lbs.	.113	Nm	Friction Torque (Losses)
T_{2b}	in.lbs.	.113	Nm	Application Acceleration Torque
T_{2B}	in.lbs.	.113	Nm	Reducer Acceleration Torque
T_{2N}	in.lbs.	.113	Nm	Reducer Nominal Output Torque
T_{2peak}	in.lbs.	.113	Nm	Application Peak Torque
T_{2PEAK}	in.lbs.	.113	Nm	Reducer Peak Torque
T_{2V}	in.lbs.	.113	Nm	Application Deceleration Torque
t	seconds	–	seconds	Time
t_b	seconds	–	seconds	Acceleration Time
t_d	seconds	–	seconds	Duration Time
t_v	seconds	–	seconds	Deceleration Time
t_p	seconds	–	seconds	Pause Time
t_r	seconds	–	seconds	Running Time

Table No. 4 Conversions Factors

Imperial				
1 inch	x	25.4	=	mm
1 in^2	x	645.16	=	mm^2
1 lb	x	.453	=	kg
1 US gal	x	3.785	=	L
1 HP	x	.746	=	kW
1 lb	x	4.45	=	N
1 lb in	x	.113	=	Nm
1 lb ft	x	1.36	=	Nm
1 lb ft	x	.1383	=	kgm
1 lb in	x	.0115	=	kgm
1 lb in^2	x	.00029	=	kgm^2
1 PSI	x	.0689	=	bar
1 PSI	x	.00689	=	N/mm^2
°F	=	32 + $^9/_5$ x °C		
Metric				
mm	x	.03937	=	inch
1 mm^2	x	.0015	=	in^2
1 kg	x	2.205	=	lb
1 L	x	.264	=	US gal
1 kW	x	1.341	=	HP
1 N	x	.225	=	lb
1 Nm	x	8.85	=	lb in
1 Nm	x	.737	=	lb ft
1 kgm	x	7.233	=	lb ft
1 kgm	x	86.798	=	lb ft
1 kgm^2 (J)	x	3418.0	=	lb in^2 (WR^2)
1 bar	x	14.5	=	PSI
1 N/mm^2	x	145.04	=	PSI
°C	=	$^5/_9$ (°F-32)		

Table No. 5 Backlash Comparison – Arcminute vs Linear Distance

Arcminute	Degrees	Linear Distance in Inches			
		at 3" R	at 12" R	at 24" R	at 48" R
1	.017	.0009	.0035	.0070	.0140
2	.033	.0017	.0070	.0140	.0279
3	.050	.0026	.0105	.0209	.0419
4	.067	.0035	.0140	.0279	.0558
5	.083	.0044	.0175	.0349	.0698
6	.100	.0052	.0209	.0419	.0838
7	.117	.0061	.0244	.0489	.0977
8	.133	.0070	.0279	.0558	.1117
9	.150	.0079	.0314	.0628	.1257
10	.167	.0087	.0349	.0698	.1396
11	.183	.0096	.0384	.0768	.1536
12	.200	.0105	.0419	.0838	.1675
13	.217	.0113	.0454	.0908	.1815
14	.233	.0122	.0489	.0977	.1955
15	.250	.0131	.0524	.1047	.2094
16	.267	.0140	.0558	.1117	.2234
17	.283	.0148	.0593	.1187	.2373
18	.300	.0157	.0628	.1257	.2513
19	.317	.0166	.0663	.1326	.2653
20	.333	.0175	.0698	.1396	.2792

These values can be interpolated for backlash or distances not shown in the table.

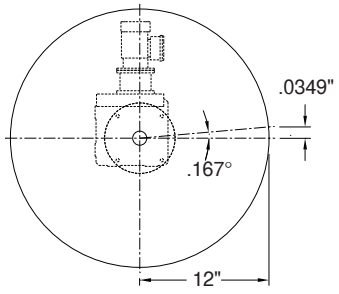
$$\text{Backlash in Arcminutes} = \left(\frac{\text{Linear Backlash in Inches x } 57.296}{\text{Radius}}\right) 60$$

Table No. 5 can be used to determine the amount of linear movement that will be realized with a given backlash value.

Example:
A "K" Series gearhead is mounted, with the output shaft vertical, under a 24" diameter turntable. The gearhead backlash is 10 arcminutes.

Reading across the table, the angular value of 10 arcminutes is .167 degrees.

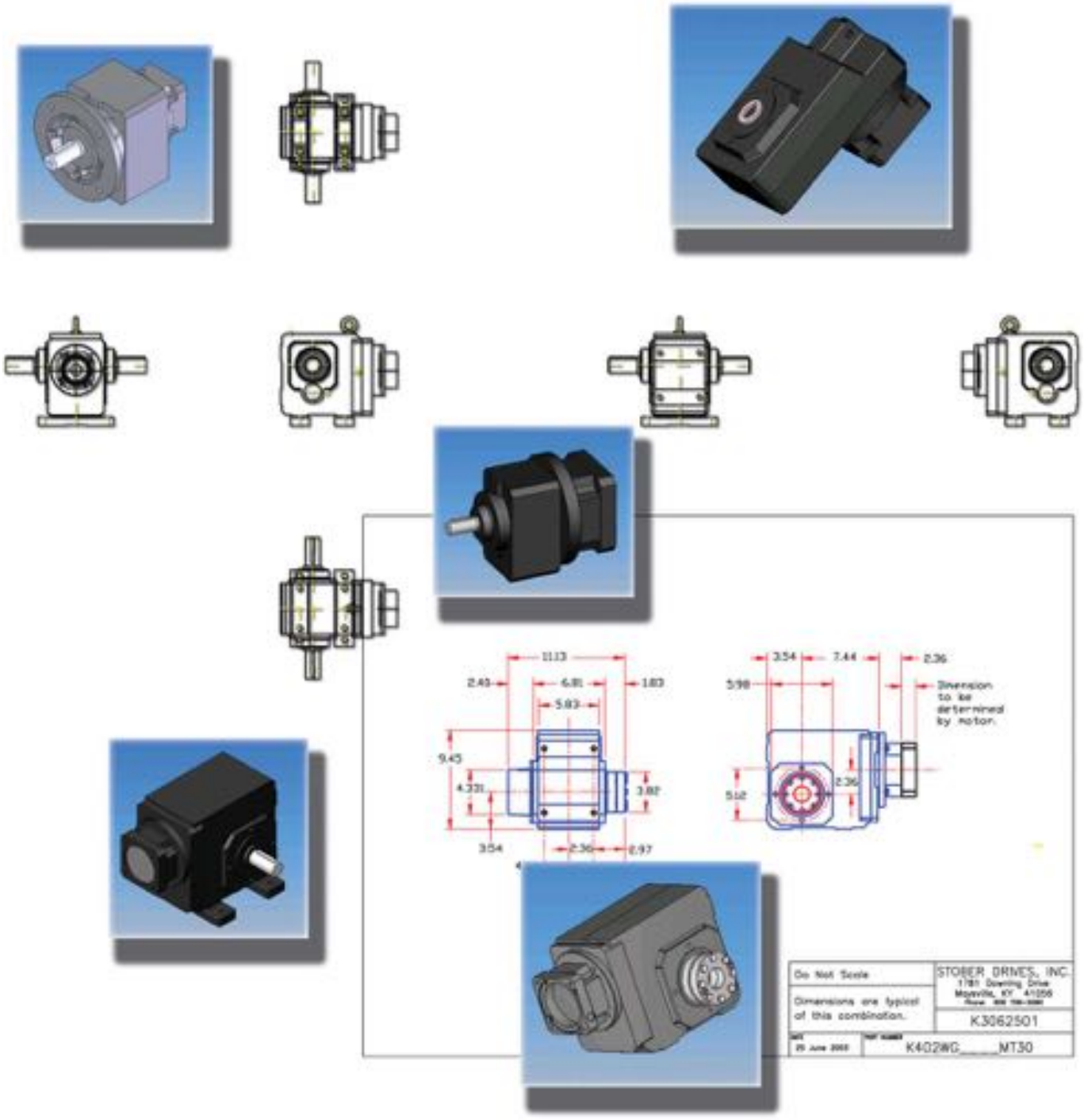
Further determination indicates 10 arcminutes backlash will allow a linear movement of .0349 inches when measured at a 12 inch radius.



See web site for drawings.

ServoFit® Gearhead
2D and 3D Drawing Support

Drawings are available in a format to suit your application. We can provide eDrawings, 2D, 3D, CAD drawings with six views, or certified faxable prints.
The eDrawing application gives you the power to view 3D models and 2D drawings with no special software. The viewer and drawing are contained in one simple download. eDrawings eliminate the communication barriers that designers and engineers deal with daily. They are small enough to email, are self-viewing, and significantly easier to understand, plus, there is no more uncertainty about whether the recipient will be able to open and view the drawing file you send.
Check our web site (www.stober.com) for product drawings in the configuation you need. Call Technical Support for information that is not shown or e-mail *sales@stober.com* or *drawings@stober.com* with your request.



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See web site for drawings.

Terms and Conditions of Sale

1. **GENERAL.** All orders for products supplied by STOBER DRIVES INC. ("STOBER") shall be subject to these terms and conditions of sales. All transactions shall be governed by the laws of the Commonwealth of Kentucky. No modifications hereto will be binding unless agreed to in writing by STOBER.

2. **CUSTOMER.** The term "Customer," as used herein, means the distributor, resale dealer, original equipment manufacturer or first end-user customer that purchases the STOBER products.

3. **WARRANTY.** STOBER products shall be free from defects in material and workmanship for a maximum of 5-years (single shift operation or 30 months multiple shift operation) for ServoFit products (ServoFit Modular System, ServoFit Precision Planetary Gearheads, and ServoFit Geared Motors) and MGS Long Life products; 3-years (single shift operation or 18 months multiple shift operation) for other MGS products; 2-years (single shift operation or 12 months multiple shift operation) for ComTrac products, from the date of shipment to the Customer. For ServoFit products, the motor on ServoFit Geared Motors, as well as all normal wear items, including oil seals and bearings, shall be covered for a period of 2-years (single shift operation or 12 months multiple shift operation). In the event that a product proves to be defective, STOBER's sole obligation shall be, at its option, to repair or replace the product. The repaired or replacement product will be shipped F.O.B. STOBER's facilities, freight prepaid by STOBER.

No employee, agent or representative of STOBER has the authority to waive, alter, vary or add to the terms hereof without the prior written approval of an officer of STOBER. It is expressly agreed that (a) this section constitutes the final expression of the parties' understanding with respect to the warranty and (b) this section is a complete and exclusive statement of the terms of the warranty.

STOBER shall have no obligation under the warranty set forth above in the event that:

(a) The Customer fails, within the warranty period to notify STOBER in writing and provide STOBER with evidence satisfactory to STOBER of the alleged defect within five (5) days after it becomes known to the customer;

(b) After inspection of a product, STOBER determines, in its sole discretion, that it is not defective in material or workmanship;

(c) Repair or replacement of a product is required through normal wear and tear;

(d) Any part in a product or any ingredient contained in a product requires replacement or repair through routine usage or normal wear and tear;

(e) A product is not maintained or used in accordance with STOBER's applicable operating and/or maintenance manuals, whether by the Customer or any third party;

(f) A product has been subject to misuse, misapplication, negligence, neglect (including, but not limited to, improper maintenance or storage), accident, catastrophe, improper installation, modification, adjustment, repair or lubrication, whether by the Customer or any third party, without the prior written consent of STOBER. Misuse shall include, but not be limited to, deterioration in a product due to chemical action and wear caused by the presence of abrasive materials;

(g) The system of connected rotating parts into which the product becomes incorporated is not compatible with the product, or it is not free from critical speed or torsional or other type of vibration within the specified operating range, no matter how induced; or

(h) The transmitted load and imposed torsional thrust and overhung loads are not within the published capacity limits for the unit sold.

Items manufactured by other parties but installed in or affixed to STOBER's products are not warranted by STOBER and bear only those warranties, express or implied, which are given by the manufacturer of such items, if any.

THE WARRANTY SET FORTH ABOVE IS INTENDED SOLELY FOR THE BENEFIT OF THE Customer AND DOES NOT APPLY TO ANY THIRD PARTY. ALL CLAIMS MUST BE MADE BY THE Customer AND MAY NOT BE MADE BY ANY THIRD PARTY. THIS WARRANTY MAY NOT BE TRANSFERRED OR ASSIGNED, IN WHOLE OR IN PART, BY THE Customer FOR ANY REASON WHATSOEVER. ANY SUCH ATTEMPTED TRANSFER OR ASSIGNMENT SHALL BE NULL AND VOID.

THIS WARRANTY TAKES THE PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH ARE HEREBY DISCLAIMED AND EXCLUDED BY STOBER, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF USE AND ALL OBLIGATIONS OR LIABILITIES ON THE PART OF STOBER FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE, REPAIR OR PERFORMANCE OF THE PRODUCTS.

4. **MODIFICATIONS.** STOBER reserves the right, without notice to the Customer, to (a) change the specifications of any product, (b) improve a product in any manner that STOBER deems necessary or appropriate and (c) discontinue the manufacture of any product.

5. **PURCHASE ORDERS.** The Customer will submit purchase orders for the products to STOBER in writing, whether by mail or telefax, which shall set forth, at a minimum: (a) an identification of the products ordered, (b) prices for such products, (c) quantities, (d) requested delivery dates and (e) shipping instructions and shipping addresses.

6. **ACCEPTANCE OF ORDERS.** All purchase orders received from the Customer are subject to acceptance by STOBER in writing.

7. **MODIFICATION OF ORDERS.** No accepted purchase order shall be modified or canceled except upon the written agreement of STOBER and the Customer. Mutually agreed cancellations shall be subject to reasonable charges based upon expenses already incurred by STOBER and commitments made by STOBER. Mutually agreed change orders shall be subject to all provisions of these Terms and Conditions of Sale.

8. **PRICE INCREASES.** STOBER may increase its prices for the products by providing the original purchaser of the products with at least thirty (30) days' prior written notice. Increased prices for products shall not apply to purchase orders accepted prior to the effective date of the price increase unless such orders provide for delivery more than thirty (30) days after the date of acceptance of the order.

9. **PRICING AND DELIVERY TERMS.** In accordance with KRS 355.2-319(1)(b), all products are delivered F.O.B. STOBER's warehouse facility in Maysville, Kentucky, or such other facility as STOBER may designate. Orders are then shipped per Customer's shipping instructions as set forth in Customer's purchase order. **CATALOG PRICING DOES NOT INCLUDE SHIPPING, HANDLING AND TAXES.** Once delivered to a common carrier of the Customer's choosing [or of STOBER's choosing if Customer has failed to specify a common carrier on or before five (5) days prior to the requested delivery date] STOBER shall have no further responsibility for the products and all risk of damage, loss or delay shall pass to the Customer. A handling fee is added to freight costs by STOBER to cover the cost of having to pay the carrier within seven (7) days when the terms with the Customer are net 30. The Customer has the option of shipping collect with our carrier or the carrier of choice.

10. **PAYMENT TERMS.** Net 30 days. All orders will be shipped either prepaid by the Customer or C.O.D., at STOBER's option, unless the Customer has established a previously approved credit line. If STOBER approves a credit line for the Customer, all payments shall be due within thirty (30) days of the date of the invoice. If any invoice is not paid in full within such thirty (30) day period, then finance charges shall be assessed at the rate of one and one-half percent (1½%) per month (eighteen percent (18%) per year). If such rate is deemed to be usurious at any time, it shall be reduced to the maximum rate permitted by applicable law. STOBER may stop or withhold shipment of products if the Customer does not fulfill its payment obligations. If STOBER is insecure about payment for any reason, STOBER may require full or partial payment in advance and as a condition to the continuation of its delivery of products.

11. **SECURITY INTEREST.** Unless and until the products are paid for in full, STOBER reserves a security interest in them to secure the unpaid balance of the purchase price. The Customer hereby grants to STOBER a power of attorney, coupled with an interest, to execute and file on behalf of the Customer all necessary financing statements and other documents required or appropriate to protect the security interest granted herein.

12. **ACCEPTANCE OF PRODUCTS.** The Customer will conduct any incoming inspection tests as soon as possible upon arrival of the products, but in no event later than ten (10) days after the date of receipt. Any products not rejected by written notice to STOBER within such period shall be deemed accepted by the Customer. STOBER shall not be liable for any additional costs, expenses or damages incurred by the Customer, directly or indirectly, as a result of any shortage, damage or discrepancy in a shipment.

13. **LIMITATION OF REMEDIES.**

(a) STOBER SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE CAUSED BY DELAY IN FURNISHING THE CUSTOMER WITH PRODUCTS.

(b) IN NO EVENT SHALL STOBER'S LIABILITY INCLUDE ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL LOSSES OR DAMAGES, EVEN IF STOBER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSS OR DAMAGE.

14. **MADE-TO-ORDER PRODUCTS.** STOBER reserves the right to revoke and amend any price quotations offered to the Customer for made-to-order products, provided that such price quotations have not been accepted by the Customer prior to the date of revocation or amendment.

15. **DIES, TOOLS AND EQUIPMENT.** Charges incurred by the Customer for dies, tools and other equipment shall not confer ownership or the right to possession therein by the Customer. All such dies, tools and equipment shall remain the property of STOBER, and STOBER shall have the exclusive right to possession thereof. STOBER shall maintain such tools and equipment in good working order.

16. **REGULATORY LAWS AND STANDARDS.** STOBER makes no representation that its products conform to state or local laws, ordinances, regulations, codes or standards except as may be otherwise agreed to in writing by STOBER.

17. **SIZES AND WEIGHTS.** STOBER's products are made only in the sizes and to the specifications set forth in its catalogs and other literature. If any alteration is requested, such altered product will be treated as a made-to-order item. STOBER assumes no responsibility for typographical errors which may appear in its catalogs or literature, and cannot accept alteration charges caused by such errors. Since weights shown in STOBER's catalogs are approximate, they cannot be used in determining freight allowances set forth in its catalogs and other literature. Freight allowances will be determined at the time of shipment and shall be based on actual shipping weight.

18. **SYSTEM DESIGN.** Responsibility for system design to ensure proper use and application of STOBER's products within their published specifications and ratings rests solely with the Customer. This includes, but is not limited to, an analysis of loads created by torsional vibrations within the entire system, regardless of how induced.

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