

1FK7 Geared Servo Motors Bevel Geared Motors

Gear Size	Motor Type	Bevel Geared Motors		Order codes			Approx. Total Weight
		Order No.		Gearbox Type	Type of Construction	Mounting Position Type	kg (lb)
	SH						
K402	100	1FK7101 – 5AF71 – 1	5 – Z	B41	G	H	59.5 (131.2)
K402	100	1FK7101 – 5AF71 – 1	5 – Z	B42	G	H	59.5 (131.2)
K402	100	1FK7101 – 5AF71 – 1	5 – Z	B43	G	H	59.5 (131.2)
K402	100	1FK7101 – 5AF71 – 1	5 – Z	B44	G	H	59.5 (131.2)
K513	100	1FK7101 – 5AF71 – 1	5 – Z	B54	G	H	65.3 (145)
K513	100	1FK7101 – 5AF71 – 1	5 – Z	B55	G	H	65.3 (145)
K613	100	1FK7101 – 5AF71 – 1	5 – Z	B65	G	H	86.8 (191.4)
K613	100	1FK7101 – 5AF71 – 1	5 – Z	B66	G	H	86.8 (191.4)
K713	100	1FK7101 – 5AF71 – 1	5 – Z	B76	G	H	115.1 (253.8)
K713	100	1FK7101 – 5AF71 – 1	5 – Z	B77	G	H	115.1 (253.8)
K713	100	1FK7101 – 5AF71 – 1	5 – Z	B77	G	H	115.1 (253.8)
K813	100	1FK7101 – 5AF71 – 1	5 – Z	B88	G	H	168.5 (371.5)
K402	100	1FK7103 – 5AF71 – 1	5 – Z	B41	G	H	66.1 (145.8)
K402	100	1FK7103 – 5AF71 – 1	5 – Z	B42	G	H	66.1 (145.8)
K402	100	1FK7103 – 5AF71 – 1	5 – Z	B43	G	H	66.1 (145.8)
K513	100	1FK7103 – 5AF71 – 1	5 – Z	B53	G	H	71.9 (158.5)
K513	100	1FK7103 – 5AF71 – 1	5 – Z	B54	G	H	71.9 (158.5)
K613	100	1FK7103 – 5AF71 – 1	5 – Z	B64	G	H	93.4 (205.9)
K513	100	1FK7103 – 5AF71 – 1	5 – Z	B55	G	H	71.9 (158.5)
K613	100	1FK7103 – 5AF71 – 1	5 – Z	B65	G	H	93.4 (205.9)
K613	100	1FK7103 – 5AF71 – 1	5 – Z	B66	G	H	93.4 (205.9)
K713	100	1FK7103 – 5AF71 – 1	5 – Z	B76	G	H	121.7 (268.3)
K713	100	1FK7103 – 5AF71 – 1	5 – Z	B77	G	H	121.7 (268.3)
K813	100	1FK7103 – 5AF71 – 1	5 – Z	B87	G	H	175.1 (386.1)
K713	100	1FK7103 – 5AF71 – 1	5 – Z	B78	G	H	121.7 (268.3)
K813	100	1FK7103 – 5AF71 – 1	5 – Z	B88	G	H	175.1 (386.1)
K402	100	1FK7105 – 5AF71 – 1	5 – Z	B41	G	H	76.1 (167.8)
K402	100	1FK7105 – 5AF71 – 1	5 – Z	B42	G	H	76.1 (167.8)
K513	100	1FK7105 – 5AF71 – 1	5 – Z	B53	G	H	82 (180.8)
K402	100	1FK7105 – 5AF71 – 1	5 – Z	B43	G	H	76.1 (167.8)
K613	100	1FK7105 – 5AF71 – 1	5 – Z	B64	G	H	103 (227.1)
K513	100	1FK7105 – 5AF71 – 1	5 – Z	B54	G	H	82 (180.8)
K613	100	1FK7105 – 5AF71 – 1	5 – Z	B65	G	H	103 (227.1)
K713	100	1FK7105 – 5AF71 – 1	5 – Z	B75	G	H	132 (291.1)
K713	100	1FK7105 – 5AF71 – 1	5 – Z	B76	G	H	132 (291.1)
K813	100	1FK7105 – 5AF71 – 1	5 – Z	B86	G	H	185 (407.9)
K813	100	1FK7105 – 5AF71 – 1	5 – Z	B87	G	H	185 (407.9)
K713	100	1FK7105 – 5AF71 – 1	5 – Z	B77	G	H	132 (291.1)
K813	100	1FK7105 – 5AF71 – 1	5 – Z	B88	G	H	185 (407.9)
• Encoder system in motor:	Incremental encoder sin/cos 1 V _{pp} Absolute encoder EnDat 2,048 pulses/revolution (shaft height 48 and higher) Simple absolute encoder EnDat 32 pulses/revolution (shaft height 48 and higher) Resolver, multipole (pole number = pole number for motor) Resolver, 2-pole	A E G S T					
• Holding brake:	Motor without holding brake Motor with holding brake	U V					
For order codes for type of construction, design, and mounting position, see page 4/32							

Servo Motors for SIMOVERT MASTERDRIVES

Synchronous Servo Motors

1FK7 Geared Servo Motors

Bevel Geared Motors

Selection and Ordering Data

Output (S3 60%)	Output Speed	Rated Output Torque	Max. Permiss. Acceleration Torque	Nominal Ratio	Exact Ratio	Cantilever Force Gear Shaft End	Overload Factor
P_2 kW (HP)	n_2 rpm	M_2 Nm (lb _f -ft)	M_{2max} Nm (lb _f -ft)	i_{nom}	i_{exact}	F_{Tperm} N (lb _f)	f_B
4.72 (6.33)	750	60.1 (44.3)	356 (262.6)	4	4/1	3346 (752)	3.4
	500	90.2 (66.5)	407 (300.2)	6	6/1	3830 (861)	2.6
	297 177	152 (112.1) 255 (188.1)	484 (357) 575 (424.1)	10 17	1333/132 559/33	4556 (1024) 5414 (1217)	1.8 1.3
4.66 (6.25)	186	238 (175.5)	1000 (737.6)	16	26071/1620	6391 (1436)	2.4
	123	361 (266.3)	1000 (737.6)	24	11687/480	7337 (1649)	1.6
	125	356 (262.6)	1584 (1168.4)	24	24583/1024	8687 (1953)	2.6
	87 85	513 (378.4) 525 (387.2)	1600 (1180.2) 2600 (1917.8)	35 35	35441/1024 567/16	9813 (2206) 13600 (3057)	1.8 2.8
4.64 (6.22)	60	739 (545.1)	2600 (1917.8)	50	166005/3328	15242 (3427)	2.0
4.63 (6.21)	46	961 (708.8)	2600 (1917.8)	65	33201/512	16635 (3740)	1.6
4.67 (6.26)	46	969 (714.7)	4650 (3429.8)	65	188387/2880	21991 (4944)	2.8
5.17 (6.93)	625	79 (58.3)	356 (262.6)	4	4/1	3346 (752)	2.5
5.20 (6.97)	417	119 (87.8)	407 (300.2)	6	6/1	3830 (861)	1.9
5.19 (6.96)	248	200 (147.5)	484 (357)	10	1333/132	4556 (1024)	1.4
5.13 (6.88)	246	199 (146.8)	900 (663.8)	10	203/20	5481 (1232)	2.6
	155	315 (232.3)	1000 (737.6)	16	26071/1620	6391 (1436)	1.8
	158	310 (228.7)	1380 (1017.8)	16	54839/3456	7567 (1701)	2.5
	103	477 (351.8)	1000 (737.6)	24	11687/480	7337 (1649)	1.2
	104	470 (346.7)	1584 (1168.4)	24	24583/1024	8687 (1953)	1.9
	72	678 (500.1)	1600 (1180.2)	35	35441/1024	9813 (2206)	1.3
5.16 (6.92)	71	694 (511.9)	2600 (1917.8)	35	567/16	13600 (3057)	2.1
5.12 (6.86)	50	978 (721.4)	2600 (1917.8)	50	166005/3328	15242 (3427)	1.5
5.13 (6.88)	51	960 (708.1)	4650 (3429.8)	49	5487/112	19971 (4490)	2.8
5.19 (6.96)	39	1271 (937.5)	2600 (1917.8)	65	33201/512	16635 (3740)	1.2
5.09 (6.82)	38	1280 (944.1)	4650 (3429.8)	65	188387/2880	21991 (4944)	2.1
7.93 (10.63)	750	101 (74.5)	356 (262.6)	4	4/1	3346 (752)	1.9
	500	151 (111.4)	407 (300.2)	6	6/1	3830 (861)	1.5
7.81 (10.47)	296	252 (185.9)	900 (663.8)	10	203/20	5481 (1232)	1.9
7.93 (10.60)	297	255 (188.1)	484 (357)	10	1333/132	4556 (1024)	1.0
7.80 (10.46)	189	394 (290.6)	1380 (1017.8)	16	54839/3456	7567 (1701)	1.9
	186	400 (295)	1000 (737.6)	16	26071/1620	6391 (1436)	1.4
	125	597 (440.3)	1584 (1168.4)	24	24583/1024	8687 (1953)	1.4
	119	626 (461.7)	2600 (1917.8)	25	64449/2560	12135 (2732)	2.3
7.84 (10.51)	85	881 (649.8)	2600 (1917.8)	35	567/16	3276 (736)	1.6
7.80 (10.46)	83	898 (662.4)	4255 (3138.5)	36	2891/80	18045 (4057)	2.6
	61	1218 (898.4)	4650 (3429.8)	49	5487/112	19971 (4490)	2.1
	60	1240 (914.6)	2600 (1917.8)	50	166005/3328	15242 (3427)	1.1
7.84 (10.51)	42	1782 (1314.4)	4326 (3190.9)	72	10325/144	22675 (5098)	1.3

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Servo Motors for SIMOVERT MASTERDRIVES

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Selection and Ordering Data

Output (S3 60%)	Output Speed	Rated Output Torque	Max. Permiss. Acceleration Torque	Nominal Ratio	Exact Ratio	Cantilever Force Gear Shaft End	Overload Factor
P_2 kW (HP)	n_2 rpm	M_2 Nm (lb _f -ft)	M_{2max} Nm (lb _f -ft)	i_{nom}	i_{exact}	F_{rperm} N (lb _f)	f_B
2.07 (2.77)	750	26.4 (19.5)	135 (121.7)	4	4/1	1793 (403)	4.4
	500	39.6 (29.2)	155 (114.3)	6	6/1	2052 (461.3)	3.3
	298	66.4 (49)	184 (135.7)	10	2881/286	2439 (548.3)	2.4
	177	112 (82.6)	384 (283.2)	17	559/33	3383 (760.5)	2.9
	129	153 (112.9)	220 (162.3)	23	2967/128	3220 (723.9)	1.2
	129	154 (113.6)	385 (284)	23	559/24	3762 (845.7)	2.1
	86	229 (168.9)	600 (442.6)	35	4171/120	6879 (1546.5)	2.2
2.03 (2.72)	62	313 (230.9)	1000 (737.6)	48	2697/56	9210 (2070.5)	2.7
	39	495 (365.1)	1600 (1180.2)	76	126697/1664	12763 (2869.2)	2.7
3.20 (4.29)	750	40.7 (30)	135 (99.6)	4	4/1	1793 (403)	2.2
	500	61.1 (45.1)	155 (114.3)	6	6/1	2052 (461.3)	1.7
	500	61.1 (45.1)	271 (199.9)	6	6/1	2394 (538.2)	2.9
	298	103 (76)	184 (135.7)	10	2881/286	2439 (548.3)	1.2
	324	94.4 (69.6)	314 (231.6)	9.3	1075/116	2767 (622)	2.2
	177	173 (127.6)	384 (283.2)	17	559/33	3383 (760.5)	1.5
	177	173 (127.6)	575 (424.1)	17	559/33	5414 (1217.1)	2.2
3.14 (4.21)	129	237 (174.8)	385 (284)	23	559/24	3762 (845.7)	1.1
	123	244 (180)	1000 (737.6)	24	11687/480	7337 (1649.4)	2.7
	93	324 (239)	1000 (737.6)	32	20677/640	8062 (1812.4)	2.0
	62	483 (356.3)	1000 (737.6)	48	2697/56	9210 (2070.5)	1.4
	63	479 (353.3)	1600 (1180.2)	48	39711/832	10923 (2455.6)	2.2
	46	648 (478)	1000 (737.6)	65	12586/195	10154 (2282.7)	1.0
	46	651 (480.2)	2574 (1898.6)	65	33201/512	16635 (3739.7)	2.6
3.19 (4.28)	86	354 (261.1)	600 (442.6)	35	4171/120	6879 (1546.5)	1.1
3.66 (4.91)	750	46.6 (34.4)	356 (262.6)	4	4/1	3346 (752.2)	5.1
	500	69.8 (51.5)	407 (300.2)	6	6/1	3830 (861)	3.9
	297	118 (87)	484 (357)	10	1333/132	4556 (1024.2)	2.7
	177	197 (145.3)	575 (424.1)	17	559/33	5414 (1217.1)	1.9
3.60 (4.83)	129	271 (199.9)	600 (442.6)	23	559/24	6020 (1353.3)	1.5
	123	279 (205.8)	1000 (737.6)	24	11687/480	7337 (1649.4)	2.4
	93	371 (273.6)	1000 (737.6)	32	20677/640	8062 (1812.4)	1.8
	87	397 (292.8)	1600 (1180.2)	35	35441/1024	9813 (2206)	2.7
	60	572 (421.9)	2600 (1917.8)	50	166005/3328	15242 (3426.5)	3.0
	46	744 (548.8)	2600 (1917.8)	65	33201/512	16635 (3739.7)	2.3

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Output (S3 60%)	Output Speed	Rated Output Torque	Max. Permiss. Acceleration Torque	Nominal Ratio	Exact Ratio	Cantilever Force Gear Shaft End	Overload Factor
P_2 kW (HP)	n_2 rpm	M_2 Nm (lb _f -ft)	M_{2max} Nm (lb _f -ft)	i_{nom}	i_{exact}	F_{Tperm} N (lb _f)	f_B
0.30 (0.4)	750	3.78 (2.8)	22 (16.2)	4	4/1	1494 (335.9)	4.7
	500	5.68 (4.2)	31 (22.9)	6	6/1	1710 (384.4)	4.5
	296	9.59 (7.1)	48 (35.4)	10	507/50	2037 (457.9)	4.1
	179	15.8 (11.7)	73 (53.8)	16.5	117/7	2406 (540.9)	3.8
	129	22 (16.2)	102 (75.2)	23	1140/49	2686 (603.8)	3.8
	85	33.2 (24.5)	135 (99.6)	35	3686/105	3081 (692.6)	3.3
	65	43.7 (32.2)	185 (136.5)	46	1849/40	4053 (911.2)	3.4
	43	65.7 (48.5)	159 (117.3)	69	6665/96	4641 (1043.3)	2.0
0.41 (0.55)	750	5.24 (3.9)	42 (31)	4	4/1	1494 (335.9)	6.7
	500	7.86 (5.8)	59 (43.5)	6	6/1	1710 (384.2)	6.3
	296	13.3 (9.8)	92 (67.9)	10	507/50	2037 (457.9)	5.8
	179	21.9 (16.2)	122 (90)	16.5	117/7	2406 (540.9)	4.7
	129	30.5 (22.5)	135 (99.6)	23	1140/49	2686 (603.8)	3.7
	85	46 (33.9)	135 (99.6)	35	3686/105	3081 (692.6)	2.5
	65	60.5 (44.6)	220 (162.3)	46	1849/40	4053 (911.2)	3.1
0.79 (1.06)	750	10.1 (7.4)	42 (31)	4	4/1	1494 (335.9)	3.6
	500	15.1 (11.1)	59 (43.5)	6	6/1	1710 (384.2)	3.4
	296	25.6 (18.9)	92 (67.9)	10	507/50	2037 (457.9)	3.1
	179	42.2 (31.1)	122 (90)	16.5	117/7	2406 (540.9)	2.5
	129	58.7 (43.3)	135 (99.6)	23	1140/49	2686 (603.8)	2.0
	85	88.5 (65.3)	135 (99.6)	35	3686/105	3081 (692.6)	1.3
	87	87.1 (64.2)	220 (162.3)	35	1935/56	3678 (826.4)	2.2
1.43 (1.92)	750	18.2 (13.4)	76 (56.1)	4	4/1	1494 (335.9)	3.3
	500	27.4 (20.2)	87 (64.2)	6	6/1	1710 (384.4)	2.5
	296	46.2 (34.1)	103 (76)	10	507/50	2037 (457.9)	1.8
	178	76.9 (56.7)	219 (161.5)	17	2967/176	2895 (650.8)	2.2
	129	106 (78.2)	220 (162.3)	23	2967/128	3220 (723.9)	1.6
	129	106 (78.2)	385 (284)	23	559/24	3762 (845.7)	2.8
	87	158 (116.5)	220 (162.3)	35	1935/56	3678 (826.4)	1.1
	86	158 (116.5)	385 (284)	35	903/26	4298 (966.2)	1.9
	65	211 (155.6)	385 (284)	46	1849/40	4728 (1062.9)	1.4
	65	211 (155.6)	600 (442.6)	46	602/13	7570 (1701.8)	2.2
	46	290 (213.9)	1000 (737.6)	65	12586/195	10154 (2282.7)	2.7
2.22 (2.98)	750	28.3 (20.9)	76 (56.1)	4	4/1	1494 (335.9)	1.8
	750	28.3 (20.9)	83 (61.2)	4	4/1	1793 (403)	2.0
	500	42.5 (31.3)	87 (64.2)	6	6/1	1710 (384.2)	1.4
	500	42.5 (31.3)	128 (94.4)	6	6/1	2394 (538.2)	2.0
	324	65.6 (48.4)	186 (132.2)	9.3	1075/116	2767 (622)	1.9
	178	119 (87.8)	219 (161.5)	17	2967/176	2895 (650.8)	1.2
	129	165 (121.7)	385 (284)	23	559/24	3762 (845.7)	1.5
	86	246 (181.4)	385 (284)	35	903/26	4298 (966.2)	1.0
	65	328 (241.9)	600 (442.6)	46	602/13	7570 (1701.8)	1.2
2.17 (2.91)	46	450 (331.9)	1000 (737.6)	65	12586/195	10154 (2282.7)	1.5