Trilogy I-Force Motors

Model	Cont. Power Watts	Continuous Force N (lb)	Peak Force N (lb)	Speed at 120vac* m/s	Speed at 120vac* in/s	Speed at 240vac* m/s	Speed at 240vac* in/s	Back EMF V/m/s	Cont. Current Arms	Peak Current Arms	Coil Weight kg (lb)
110-1S				7.0	276	7.0	276	7.9	2.5	11.2	
110-1P	47	24.5 (5.5)	108.5 (24.4)	7.0	276	7.0	276	3.9	5.1	22.5	.12 (.27)
110-1T				7.0	276	7.0	276	2.6	7.6	33.7	
110-2S				7.0	276	7.0	276	15.7	2.3	10.4	
110-2P	82	45.4 (10.2)	202.5 (45.5)	7.0	276	7.0	276	7.9	4.7	20.9	.22 (.48)
110-2T				7.0	276	7.0	276	5.2	7.0	31.4	
210-1S				7.0	276	7.0	276	12.6	1.9	8.9	
210-1P	45	30.7 (6.9)	137.0 (30.8)	7.0	276	7.0	276	6.3	3.9	17.8	.16 (.35)
210-1T				7.0	276	7.0	276	4.2	5.9	26.7	
210-2S				6.7	265	7.0	276	25.2	1.8	8.3	
210-2P	79	57.4 (12.9)	255.8 (57.5)	7.0	276	7.0	276	12.6	3.7	16.7	.27 (.60)
210-2T				7.0	276	7.0	276	8.4	5.5	25.0	
210-3S				4.5	177	7.0	276	37.8	1.8	8.1	
210-3P	113	84.1 (18.9)	375.0 (84.3)	7.0	276	7.0	276	18.9	3.7	16.3	.39 (.86)
210-3T				7.0	276	7.0	276	12.6	5.5	24.4	
210-4S				3.4	133	6.7	265	50.4	1.8	8.0	
210-4P	147	110.3 (24.8)	494.2 (111.1)	6.7	265	7.0	276	25.2	3.5	16.0	.51 (1.12)
210-4T				7.0	276	7.0	276	16.8	5.3	23.9	
310-1S				7.0	276	7.0	276	15.7	2.5	11.4	
310-1P	54	49.0 (11.0)	218.9 (49.2)	7.0	276	7.0	276	7.8	5.1	22.8	.31 (.69)
310-1T				7.0	276	7.0	276	5.2	7.6	34.2	
310-2S				5.4	212	7.0	276	31.5	2.4	10.6	
310-2P	94	91.6 (20.6)	409.3 (92.0)	7.0	276	7.0	276	15.7	4.8	21.2	.55 (1.22)
310-2T				7.0	276	7.0	276	10.5	7.2	31.8	
310-3S				3.6	142	7.0	276	47.2	2.5	10.4	
310-3P	135	133.9 (30.1)	600.0 (135.1)	7.0	276	7.0	276	23.6	4.7	20.8	.80 (1.75)
310-3T				7.0	276	7.0	276	15.7	7.0	31.2	
310-4S				2.7	106	5.4	212	63.0	2.3	10.3	
310-4P	179	176.2 (39.6)	790.0 (177.2)	5.4	212	7.0	276	31.5	4.5	20.5	1.03 (2.27)
310-4T				7.0	276	7.0	276	21.0	6.8	30.8	
310-5S				2.2	85	4.3	170	78.7	2.3	10.2	
310-5P	215	219.3 (49.3)	980.0 (220.3)	4.3	170	7.0	276	39.4	4.5	20.4	1.27 (2.80)
310-5T				6.5	255	7.0	276	26.2	6.8	30.5	
310-6S				1.8	71	3.6	141	94.5	2.3	10.1	
310-6P	256	262.0 (58.9)	1170 (263.2)	3.6	142	7.0	276	47.2	4.5	20.2	1.53 (3.36)
310-6T				5.4	212	7.0	276	31.5	6.8	30.3	
410-2S				2.7	106	5.4	212	63.0	3.0	13.5	
410-2P	142	233.1 (52.4)	1041 (234.1)	5.4	212	7.0	276	31.5	6.1	27.0	1.59 (3.5)
410-2T				7.0	276	7.0	276	21.0	9.1	40.5	
410-3S				1.8	71	3.6	141	94.5	3.0	13.2	
410-3P	203	340.8 (76.6)	1524 (342.5)	3.6	142	7.0	276	47.2	5.9	23.6	2.27 (5.0)
410-3T				5.4	212	7.0	276	31.5	8.9	39.5	
410-4S				1.3	53	2.7	106	126.0	2.9	13.0	
410-4P	263	448.9 (100.9)	2006 (451.0)	2.7	106	5.4	212	63.0	5.8	26.0	2.95 (6.5)
410-4T				4.0	159	7.0	276	42.0	8.7	39.0	
410-6S				0.9	35	1.8	71	189.0	2.9	12.8	
410-6P	385	663.7 (149.2)	2967 (667.0)	1.8	71	3.6	141	94.5	5.8	25.6	4.32 (9.5)
410-6T				2.7	106	5.4	212	63.0	8.7	38.4	
410-8S				0.7	27	1.3	53	252.0	2.8	12.7	
410-8P	506	878.6 (197.5)	3928 (883.0)	1.3	53	2.7	106	126.0	5.7	25.5	5.68 (12.5)
410-8T				2.0	80	4.0	159	84.0	8.5	38.2	
ML50-2S	78	189 (42.6)	847 (190.4)	3.5	136	6.9	272	49.1	3.2	14.1	.7 (1.6)
ML50-2P				6.9	273	7.0	276	24.5	6.3	28.1	
ML50-3S	117	284 (63.9)	1270 (285.6)	2.3	91	4.6	182	73.6	3.2	14.1	1.1 (2.4)
ML50-3T				6.9	273	7.0	276	24.5	9.5	42.2	
ML50-4S				1.7	68	3.5	136	98.2	3.2	14.1	
ML50-4P	156	379 (85.1)	1694 (380.8)	3.5	136	6.9	272	49.1	6.3	28.1	1.5 (3.2)
ML50-4D				6.9	273	7.0	276	24.5	12.6	53.4	
ML50-6S				1.2	45	2.3	91	147.3	3.2	14.1	
ML50-6P	234	568 (127.7)	2541 (571.1)	2.3	91	4.6	182	73.6	6.3	28.1	2.2 (4.8)
ML50-6T				3.5	136	6.9	272	49.1	9.5	42.2	
ML50-8P	312	757 (170.3)	3387 (761.5)	1.7	68	3.5	136	98.2	6.3	28.1	2.9 (6.4)
ML50-8D				3.5	136	6.9	272	49.1	12.6	53.4	
ML50-9T	351	852 (191.6)	3811 (856.7)	2.3	91	4.6	182	73.6	9.5	42.2	3.3 (7.2)

Trilogy Ripped Motors

Model	Cont. Power Watts	Continuous Force N (lb)	Peak Force N (lb)	Speed at 120vac* m/s	Speed at 120vac* in/s	Speed at 240vac* m/s	Speed at 240vac* in/s	Back EMF V/m/s	Cont. Current Arms	Peak Current Arms	Attraction Force N (lb)	Coil Weight kg (lb)
R5-1S	96	56 (13)	190 (43)	6.5	257	7.0	276	26.0	1.7	7.9	667 (150)	.6 (1.4)
R5-2S	140	97 (22)	325 (73)	6.5	257	7.0	276	26.0	3	13.5	979 (220)	1.0 (2.1)
R7-1S	180	154 (35)	587 (132)	6.3	249	7.0	276	26.8	4.6	21	1557 (350)	1.5 (3.3)
R7-2S	360	308 (69)	1174 (264)	3.2	125	6.3	250	53.5	4.6	21	3114 (700)	3.0 (6.7)
R7-2P				6.3	249	7.0	276	26.8	9.3	42		
R7-3S	540	462 (104)	1761 (396)	2.1	83	4.2	166	80.3	4.6	21	4671 (1050)	4.5 (10.0)
R7-3T				6.3	249	7.0	276	26.8	14	63		
R9-1S	240	306 (69)	1061 (239)	3.2	125	6.3	250	53.5	4.6	20.8	3114 (700)	3.0 (6.6)
R9-2S	480	612 (138)	2123 (477)	1.6	62	3.2	125	107.1	4.6	20.8	6227 (1400)	6.0 (13.2)
R9-2P				3.2	125	6.3	250	53.5	9.3	41.8		
R9-3S	720	918 (206)	3184 (716)	1.1	42	2.1	83	160.6	4.6	20.8	9341 (2100)	9.0 (19.8)
R9-3T				3.2	125	6.3	250	53.5	14	62.6		
R10-1S	305	374 (84)	1366 (307)	3.1	121	6.2	242	55.1	5.5	24.8	3559 (800)	4.5 (10.0)
R10-2S	610	747 (168)	2731 (614)	1.5	61	3.1	121	110.2	5.5	24.8	7117 (1600)	9.1 (20.0)
R10-2P				3.1	121	6.2	242	55.1	11	49.6		
R10-3S	915	1121 (252)	4097 (921)	1.0	40	2.1	81	165.4	5.5	24.8	10675 (2400)	13.6 (30.0)
R10-3T				3.1	121	6.2	242	55.1	16.5	74.4		
R16-1S	353	743 (167)	2478 (557)	1.5	61	3.1	121	110.2	5.5	24.6	7117 (1600)	9.1 (20.0)
R16-2S	707	1487 (334)	4955 (1114)	0.8	30	1.5	61	220.5	5.5	24.6	14234 (3200)	18.2 (40.0)
R16-2P				1.5	61	3.1	121	110.2	11	49.3		
R16-3S	1060	2230 (501)	7433 (1671)	0.5	20	1.0	40	330.7	5.5	24.6	21351 (4800)	27.3 (60.0)
R16-3T				1.5	61	3.1	121	110.2	16.5	73.9		

Trilogy I-Force Motors	
Model	**Recommended Wiring Option**
110	**WD3**
210	**WD7**
310	**WD7**
410	**WD3**
ML50	**MLX-HED-R**

		Coil Lengths			
Model	**Cross Section Dimensions**	**1**	**2**	**3**	**CM/HED**
R5	55 x 37.5mm (2.165 x 1.476in)	130 (5.12in)	190 (7.48in)		28.2 (1.11in)
R7	70 x 37.5mm (2.756 x 1.476in)	218.2 (8.59in)	378.2 (14.89in)	538.2 (21.19in)	28.2 (1.11in)
R9	110 x 37.5mm (4.33 x 1.48 in)	190 (7.48in)	350 (13.78in)	510 (20.08in)	28.2 (1.11in)
R10	100 x 58mm (3.94 x 2.28 in)	305.5 (12.03in)	545.5 (21.48in)	785.5 (30.93in)	30 (1.18in)
R16	160 x 58mm (6.30 x 2.28 in)	305.5 (12.03in)	545.5 (21.48in)	785.5 (30.93in)	30 (1.18in)

Trilogy I-Force Motors		Coil Lengths*, mm							
Model	**Cross Section Dimensions**	**1**	**2**	**3**	**4**	**5**	**6**	**8**	**9**
110	50 x 21mm (2.05 x .82in)	81.3	142.2						
210	57.1 x 31.7mm (2.25 x 1.25in)	81.3	142.2	203.2	264.2				
310	86.4 x 34.3mm (3.40 x 1.35in)	81.3	142.2	203.2	264.2	325.1	386.1		
410	114.3 x 50.8mm (4.50 x 2.00in)		199.1	284.5	369.8		540.5	711.2	
ML50	155 x 50mm (6.10 x 1.97in)		120	180	240		360	480	540

*ML50 uses a MLX-CM that's 40mm in length.
No length adder for 110/210/310/410. Use the above WD3 or WD7 for embedded halls.

Trilogy I-Force Motor/Drive Compatibility

Model	Continuous Current Arms	Aries Drive (ARxxxE)							Compax3 Drive (Sxxx-yy)			
		01	02	04	08	13	20	30	025-V2	063-V2	100-V2	150-V2
		1.0	1.8	3.0	4.5	6.3	10.0	16.0	2.5	6.3	10.0	15.0
110-1S	2.5			■					■			
110-1P	5.1					■				■		
110-1T	7.6						■				■	
110-2S	2.3			■					■			
110-2P	4.7					■				■		
110-2T	7						■				■	
210-1S	1.9			■					■			
210-1P	3.9				■					■		
210-1T	5.9					■				■		
210-2S	1.8		■						■			
210-2P	3.7				■					■		
210-2T	5.5					■				■		
210-3S	1.8		■						■			
210-3P	3.7				■					■		
210-3T	5.5					■				■		
210-4S	1.8		■						■			
210-4P	3.5				■					■		
210-4T	5.3					■				■		
310-1S	2.5			■					■			
310-1P	5.1					■				■		
310-1T	7.6						■				■	
310-2S	2.4			■					■			
310-2P	4.8					■				■		
310-2T	7.2						■				■	
310-3S	2.5			■					■			
310-3P	4.7					■				■		
310-3T	7						■				■	
310-4S	2.3			■					■			
310-4P	4.5				■					■		
310-4T	6.8						■				■	
310-5S	2.3			■					■			
310-5P	4.5				■					■		
310-5T	6.8						■				■	
310-6S	2.3			■					■			
310-6P	4.5				■					■		
310-6T	6.8						■				■	
410-2S	3			■						■		
410-2P	6.1					■				■		
410-2T	9.1						■				■	
410-3S	3			■						■		
410-3P	5.9					■				■		
410-3T	8.9						■				■	
410-4S	2.9			■						■		
410-4P	5.8					■				■		
410-4T	8.7						■				■	
410-6S	2.9			■						■		
410-6P	5.8					■				■		
410-6T	8.7						■				■	
410-8S	2.8			■						■		
410-8P	5.7					■				■		
410-8T	8.5						■				■	
ML50-2S	3.2				■					■		
ML50-2P	6.3					■				■		
ML50-3S	3.2				■					■		
ML50-3T	9.5						■				■	
ML50-4S	3.2				■					■		
ML50-4P	6.3					■				■		
ML50-4D	12.6							■				■
ML50-6S	3.2				■					■		
ML50-6P	6.3					■				■		
ML50-6T	9.5						■				■	
ML50-8P	6.3					■				■		
ML50-8D	12.6							■				■
ML50-9T	9.5						■				■	

Note: Above motor and drive combinations based on continuous motor current ratings. Smaller amplifiers (for low force, high speed) or larger amplifiers (using higher peak currents for faster accelerations) may be appropriate depending upon the application requirements. Contact your local Parker ATC for sizing assistance and/or use Parker MotionSizer in evaluating appropriate motor/drive combinations.

Trilogy Ripped Motor/Drive Compatibility

		Aries Drive (ARxxxE)							Compax3 Drive (Sxxx-yy)							
		01	02	04	08	13	20	30	025-V2	063-V2	100-V2	150-V2	038-V4	075-V4	150-V4	300-V4
Model	Continuous Current Arms	1.0	1.8	3.0	4.5	6.3	10.0	16.0	2.5	6.3	10.0	15.0	3.8	7.5	15.0	30.0
R5-1S	1.7															
R5-2S	3															
R7-1S	4.6															
R7-2S	4.6															
R7-2P	9.3															
R7-3S	4.6															
R7-3T	14															
R9-1S	4.6															
R9-2S	4.6															
R9-2P	9.3															
R9-3S	4.6															
R9-3T	14															
R10-1S	5.5															
R10-2S	5.5															
R10-2P	11															
R10-3S	5.5															
R10-3T	16.5															
R16-1S	5.5															
R16-2S	5.5															
R16-2P	11															
R16-3S	5.5															
R16-3T	16.5															

Note: Above motor and drive combinations based on continuous motor current ratings. Smaller amplifiers (for low force, high speed) or larger amplifiers (using higher peak currents for faster accelerations) may be appropriate depending upon the application requirements. Contact your local Parker ATC for sizing assistance and/or use Parker MotionSizer in evaluating appropriate motor/drive combinations.