

MaxPlus® Brushless Rotary Servo Motors.

Proven to outperform the competition.



The MaxPlus family is redefining performance, flexibility and reliability, with the industry's broadest range of brushless servo motors - from 1 1/2" to 12" (40mm to 320mm). Each unit delivers more performance in a smaller package for less cost. What's more, the reliability of MaxPlus Series motors is becoming legendary in demanding applications. Our rugged construction and industry-leading performance features give you an unbeatable price/performance/cost of ownership combination.

The difference is in the performance.

The outstanding performance of MaxPlus servo motors is engineered from the beginning. Our servo motors offer features that include:

- High-performance neodymium magnet material
- Resolver for position and velocity feedback
- Custom windings available
- IP65 sealing for washdown environments, standard
- MS connector termination or flying lead termination
- Thermoswitch in windings
- Optional internally mounted brake
- Optional additional feedback transducers
- Optional gear reducers

Technological advances that produce results.

We are working with new and emerging technologies to improve our product offering. It is the mission of the MTS Automation Division to continually improve the quality, reliability and cost effectiveness of our products, while achieving higher levels of performance.

Custom designs to meet particular needs.

MaxPlus is not just an "off the shelf" line of servo motors. It is a line that offers unparalleled flexibility to achieve precise application requirements. What's more, we are committed to working with our customers to custom design solutions that meet specific performance and cost criteria.

The only motor line with these performance specs:

More torque to volume, more torque to inertia, and more torque per dollar. The full line of MaxPlus brushless servo motors outperforms competitive units in virtually every performance category. This "best of class" performance is also matched by our MaxPlus amplifiers and controllers.

Model #	Size (Inches)	Horsepower (HP)	Max Operating Speed (RPM)	Speed at Rated Torque (RPM)	Peak Torque (IN-LBS [Nm])	Model #	Size (Inches)	Horsepower (HP)	Max Operating Speed (RPM)	Speed at Rated Torque (RPM)	Peak Torque (IN-LBS [Nm])
MPM401ATE	1.5"	0.027	6000	4800	1.5 / 0.17	MPM1420ATG	6"	2.9	2700	2400	255.0 / 29
MPM401BTE	1.5"	0.022	5200	3600	1.6 / 0.18	MPM1420BTG	6"	1.6	1750	1300	255.0 / 29
MPM401CTE	1.5"	0.016	4400	2500	1.7 / 0.19	MPM1420CTJ	6"	3.1	3400	2800	255.0 / 29
MPM402ATE	1.5"	0.065	6000	4800	3.5 / 0.39	MPM1420DTJ	6"	1.6	1750	1300	255.0 / 29
MPM402BTE	1.5"	0.059	5200	4100	3.5 / 0.39	MPM1421ATG	6"	4.4	2700	2400	390.0 / 44
MPM402CTE	1.5"	0.054	4400	3500	3.6 / 0.41	MPM1421BTG	6"	2.9	1750	1500	390.0 / 44
MPM403ATE	1.5"	0.093	6000	4800	3.7 / 0.41	MPM1421CTJ	6"	4.9	3400	2800	390.0 / 44
MPM403BTE	1.5"	0.085	5200	4100	4.7 / 0.53	MPM1421DTJ	6"	2.9	1750	1500	390.0 / 44
MPM403CTE	1.5"	0.078	4400	3500	4.9 / 0.55	MPM1422ATG	6"	6.8	2700	2400	630.0 / 71
MPM404ATE	1.5"	0.11	6000	4800	5.3 / 0.59	MPM1422BTG	6"	4.5	1750	1500	630.0 / 71
MPM404BTE	1.5"	0.10	5200	4100	5.4 / 0.61	MPM1422CTJ	6"	7.6	3400	2800	630.0 / 71
MPM404CTE	1.5"	0.093	4400	3500	5.6 / 0.63	MPM1422DTJ	6"	4.5	1750	1500	630.0 / 71
MPM661ATF	2"	0.15	6000	4000	9.7 / 1.1	MPM1423ATG	6"	9.1	2700	2400	840.0 / 95
MPM661BTF	2"	0.091	3000	2500	9.5 / 1.1	MPM1423BTG	6"	6.0	1750	1500	840.0 / 95
MPM662ATF	2"	0.22	5000	4000	15.1 / 1.7	MPM1423CTJ	6"	9.8	3400	2800	840.0 / 95
MPM662BTF	2"	0.16	3000	2500	15.1 / 1.7	MPM1423DTJ	6"	6.0	1750	1500	840.0 / 95
MPM663ATF	2"	0.36	5500	4500	22.5 / 2.5	MPM1424ATG	6"	10	2700	2100	1081.0 / 120
MPM663BTF	2"	0.19	3300	2000	22.5 / 2.5	MPM1424BTG	6"	7.6	1750	1500	1081.0 / 120
MPM664ATF	2"	0.48	6000	5000	30.0 / 3.4	MPM1424CTJ	6"	12	3400	2800	1081.0 / 120
MPM664BTF	2"	0.38	3600	3000	30.0 / 3.4	MPM1424DTJ	6"	7.6	1750	1500	1081.0 / 120
MPM721ATF	2.75"	0.41	6800	5500	17.0 / 1.9	MPM1900ATG	8"	5.7	3000	2400	600.0 / 68
MPM721BTG	2.75"	0.41	6800	5500	17.0 / 1.9	MPM1900BTG	8"	3.4	1500	1200	600.0 / 68
MPM721CTG	2.75"	0.24	4000	3000	17.0 / 1.9	MPM1900CTJ	8"	5.7	3000	2400	600.0 / 68
MPM722ATF	2.75"	0.75	7000	5000	34.0 / 3.8	MPM1900DTJ	8"	3.4	1500	1200	600.0 / 68
MPM722BTG	2.75"	0.75	7000	5000	34.0 / 3.8	MPM1901ATG	8"	13	3000	2400	1200.0 / 140
MPM722CTG	2.75"	0.48	4000	3000	34.0 / 3.8	MPM1901BTG	8"	6.5	1500	1200	1200.0 / 140
MPM723ATF	2.75"	0.91	6300	4500	45.0 / 5.1	MPM1901CTJ	8"	13	3000	2400	1200.0 / 140
MPM723BTG	2.75"	0.91	6300	4500	45.0 / 5.1	MPM1901DTJ	8"	6.5	1500	1200	1200.0 / 140
MPM723CTG	2.75"	0.63	4000	3000	45.0 / 5.1	MPM1902ATG	8"	21	3000	2400	1780.0 / 200
MPM724ATF	2.75"	1.3	6000	5000	56.0 / 6.3	MPM1902BTG	8"	10	1500	1200	1920.0 / 220
MPM724BTG	2.75"	1.3	6000	5000	56.0 / 6.3	MPM1902CTJ	8"	21	3000	2400	1920.0 / 220
MPM724CTG	2.75"	0.79	4000	3000	56.0 / 6.3	MPM1902DTJ	8"	10	1500	1200	1920.0 / 220
MPM890ATG	3"	0.51	5000	4000	36.0 / 4.1	MPM1903ATG	8"	29	3000	2400	1780.0 / 200
MPM890BTG	3"	0.38	3000	2400	36.0 / 4.1	MPM1903BTG	8"	14	1500	1200	2640.0 / 300
MPM891ATG	3"	0.83	5000	4000	58.8 / 6.6	MPM1903CTJ	8"	29	3000	2400	2640.0 / 300
MPM891BTG	3"	0.55	3000	2400	58.8 / 6.6	MPM1903DTJ	8"	14	1500	1200	2640.0 / 300
MPM892ATG	3"	1.6	5000	4000	109.9 / 12	MPM1904ATG	8"	36	3000	2400	1780.0 / 200
MPM892BTG	3"	1.0	3000	2400	111.5 / 13	MPM1904BTG	8"	18	1500	1200	3276.0 / 370
MPM893ATG	3"	2.0	4100	3600	143.2 / 16	MPM1904CTJ	8"	36	3000	2400	3276.0 / 370
MPM893BTG	3"	0.86	2000	1500	137.6 / 16	MPM1904DTJ	8"	18	1500	1200	3276.0 / 370
MPM1140ATG	4"	1.4	3800	3000	114.0 / 13	MPM3201R**A*					
MPM1140BTG	4"	0.76	2000	1400	114.0 / 13	MPM3201R**B*					
MPM1140CTJ	4"	1.3	4000	3000	114.0 / 13	MPM3201R**C*					
MPM1140DTJ	4"	0.73	1900	1400	114.0 / 13	MPM3201R**A*0					
MPM1141ATG	4"	2.1	4200	3000	189.0 / 21	MPM3201R**B*0					
MPM1141BTG	4"	1.2	2100	1500	189.0 / 21	MPM3201R**C*0					
MPM1141CTJ	4"	2.1	4200	3000	189.0 / 21	MPM3202R**B*					
MPM1141DTJ	4"	1.2	2100	1500	189.0 / 21	MPM3202R**C*					
MPM1142ATG	4"	3.3	4200	3000	291.0 / 33	MPM3202R**D*					
MPM1142BTG	4"	1.8	2100	1500	291.0 / 33	MPM3202R**B*0					
MPM1142CTJ	4"	3.3	4200	3000	291.0 / 33	MPM3202R**C*0					
MPM1142DTJ	4"	1.8	2100	1500	291.0 / 33	MPM3202R**D*0					
MPM1143ATG	4"	4.6	4200	3000	407.0 / 46	MPM3203R**B*					
MPM1143BTG	4"	2.5	2100	1500	407.0 / 46	MPM3203R**C*					
MPM1143CTJ	4"	4.6	4200	3000	407.0 / 46	MPM3203R**D*					
MPM1143DTJ	4"	2.5	2100	1500	407.0 / 46	MPM3203R**B*0					
						MPM3203R**C*0					
						MPM3203R**D*0					
						MPM3204R**B*					
						MPM3204R**C*					
						MPM3204R**D*					
						MPM3204R**B*0					
						MPM3204R**C*0					
						MPM3204R**D*0					

Consult Factory



MTS Systems Corporation Automation Division

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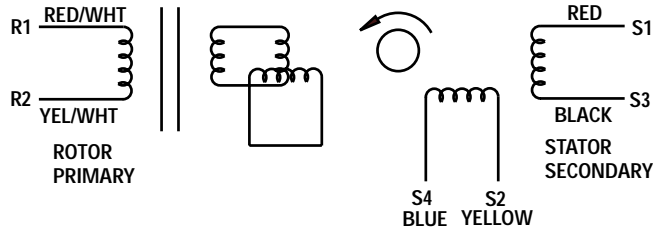
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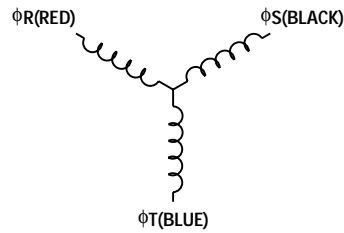
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Resolver



SCHEMATIC DRAWING FOR BRUSHLESS RESOLVER

Motor Winding



3 PHASE - 4 POLE
1 1/2" • 55 MM • 2" MOTORS

3 PHASE - 6 POLE
2 3/4" • 3" • 4" • 6" • 8" MOTORS

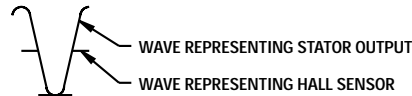
Encoder

MOTOR & HALL POSITION CHART

HALL LEADS	BROWN	GRAY	WHITE
MOTOR LEADS	BLACK respect to RED	RED respect to BLUE	BLUE respect to BLACK
VIEW ON THE OSCILLOSCOPE			

1.5" - 8" MOTORS

*MOTOR ROTATION CCW (COUNTER CLOCKWISE)
(LOOKING AT THE FACE OF THE MOTOR)



MPM	114	1	A	T	G	7	JN	1	N
MAX PLUS MOTOR	FRAME SIZE	STACK LENGTH	WINDING	AMP TYPE	VOLTAGE	MOUNTING	FEEDBACK	TERMINATION	BRAKE OPTION
	40 (1.5")	0=(1/2)	A	T=TRAPEZOIDAL	LINE	6=ENGLISH	G=RESOLVER (STANDARD)	1=CONNECTOR (STANDARD)	R=24V SPRING
	55	1	B	S=SINEUSOIDAL	E=54 VAC	7=METRIC	H=RESOLVER (GERMAN AMPS)	2=CONNECTOR (INTERCON)	N=NONE
	66 (2")	2	C		P=95 VAC	8=ENG FOOT MOUNT*		3=PIPE THREAD (NPT)	
	72 (2 3/4")	3	D	X=SPECIAL*	F=110 VAC	9=MET FOOT MOUNT*	J=ENCODER (STANDARD)	4=FLYING LEADS (1.5")	X=SPECIAL*
	89 (3")	4			G=230 VAC		K=500L		
	114 (4")	5*	X=SPECIAL*		H=380 VAC	X=SPECIAL*	M=1000L	X=SPECIAL*	
	142 (6")	6*			N=400 VAC		N=2000L		
	190 (8")				J=460 VAC		L=2500L		
							P=3000L		
					BUS		Q=5000L		
					K=24 VDC		T=6000L		
					L=48 VDC		X=1024L		
					M=85 VDC		Y=2048L		
							Z=4096L		
					X=SPECIAL*		W=ENCODER**		
							TBF/1		
							K=500L		
							M=1000L		
							N=2000L		
							P=3000L		
							Q=5000L		
							T=6000L		
							X=1024L		
							Y=2048L		
							Z=4096L		
							X=SPECIAL*		

*** OR "X=SPECIAL*" -Consult Factory
 The sample part number shown above will be superceding MPM1141T2M-AM
 Please reference separate part numbering chart for the 12" motors.
 **W=CSM GmbH encoder alignment option

