

MOOG

Fastact G - G46x Series High Voltage Brushless Servomotors



Description

The Fastact G – High Voltage Series based on the highly dynamic MOOG AC Servomotors and a special winding that guarantee outstanding performance and high power density.

The Fastact G – High Voltage Series enables the customer to directly connect the drives to primary power mains avoiding any additional system cost associated with step down transformers.

Torque ratings range from 0,2 to 76 Nm at $D0\theta_{win}=110^{\circ}C$.

The data for the recommended digital drives are in the corresponding catalogues.

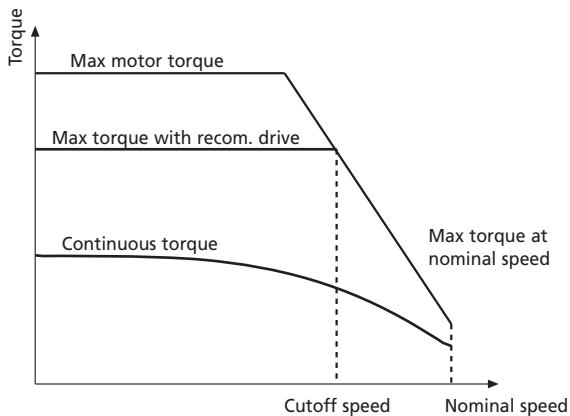
For specific options please contact our staff.

For mechanical dimension and order information please refer to the Fastact G catalogue.

Standard models

- Rare earth high energy magnets
- 3-phase star connected winding
- IP65 protection
- Class F insulation
- Motor poles number: 8-12
- Resolver poles number: 2
- Plain shaft
- Black finish
- Thermal protection: PTC with threshold at $155^{\circ}C$
- VDE connectors with protruding earth contact and metal shell

Torque-Speed Characteristics



The motors described herein are UL recognized under file number E 13 7630.

This catalog is for users with technical knowledge. To ensure that all necessary characteristics for function and safety of the system are given, the user has to check the suitability of the products described herein. The products described herein are subject to change without notice. In case of doubt, please contact Moog.

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Dimensions and tolerances in mm

Characteristics and nominal values with sinusoidal drive	G462				G463				Unit
	2xx	4xx	6xx	8xx	2xx	4xx	6xx	8xx	
Stack length	L05	L10	L20	L40	L05	L15	L25	L40	
Nominal torque, continuous duty, locked rotor ($\Delta\theta_{win} = 110K^{\circ}$)	0.25	0.5	1	2	0.6	1.6	2.5	3.75	Nm
Nominal speed	9000	9000	7500	7500	8700	6200	4800	4700	r/min
Recommended drive DS2000 μ DS	3/6 3/8	3/6 3/8	3/6 3/8	6/11 6/16	3/6 3/8	3/6 3/8	3/6 3/8	6/11 6/16	Drive Type
Max torque	0.8	1.6	3.1	6.2	1.7	5	8.3	13.1	Nm
Max torque with recommended drive DS2000 μ DS	0.8 0.8	1.6 1.6	3.1 3.1	6.2 6.2	1.7 1.7	4.2 4.9	7.0 8.2	12.2 13.1	Nm
Cutoff speed with recommended drive DS2000 μ DS	4400	6000	3500	3900	3800 3800	4000 3400	2200 1900	2000 1800	r/min
Max torque with recommended drive at nominal speed (DS2000, μ DS)	0.5	1.2	1.6	4	0.92	3.2	2.9	5.4	Nm
Nominal torque, continuous duty, nominal speed, ($\Delta\theta_{win} = 110K^{\circ}$)	0.18	0.29	0.65	0.96	0.54	1.44	2.2	3.15	Nm
Output power, continuous duty, nominal speed, ($\Delta\theta_{win} = 110K^{\circ}$)	0.17	0.27	0.51	0.75	0.49	0.93	1.11	1.5	kW
Rotor inertia (resolver included)	0.09	0.13	0.22	0.41	0.16	0.39	0.62	0.97	Kgcm ²
Weight (without brake)	1	1.2	1.5	2.3	1.4	2	2.6	3.5	Kg
Torque constant	0.40	0.40	0.64	0.68	0.48	0.71	1.19	1.27	Nm/Arms
Winding resistance at 20°C (phase to phase)	60.7	20.0	19.2	7.9	24.6	9.5	13.0	8.1	Ohm
Winding inductance (phase to phase)	33.9	15.0	17.9	8.6	29.0	16.1	25.0	17.0	mH
Nominal current, locked rotor	0.6	1.3	1.6	2.9	1.3	2.3	2.1	3.0	Arms
Standard motor length ^(*)	110	123	148	199	115	140	166	204	mm
Square flange side	55	55	55	55	70	70	70	70	mm

Characteristics and nominal values with sinusoidal drive	G464					G465					Unit
	2xx	4xx	6xx	8xx	9xx	2xx	4xx	6xx	8xx		
Stack length	L05	L10	L20	L40	L60	L10	L20	L30	L50		
Nominal torque, continuous duty, locked rotor ($\Delta\theta$ win = 110K°)	1.5	2.9	5.0	8.3	11.2	6.1	11.4	16.7	26.3	Nm	
Nominal speed	7800	5500	4200	3300	3000	4800	4000	3400	2800	r/min	
Recommended drive DS2000 μ DS	3/6 3/8	6/11 6/16	6/11 6/16	8/16 6/16	14/30 -	8/16 6/16	8/16 -	14/30 -	25/49 -	Drive Type	
Max torque	3.3	6.6	13.2	26.5	39.8	13	26	39	65	Nm	
Max torque with recommended drive DS2000 μ DS	2.8 3.3	5.7 6.6	11.0 13.2	20.3 20.3	39.8 -	13.0	20.4	34.8	65.0	Nm	
Cutoff speed with recommended drive DS2000 μ DS	4500 4000	4400 3600	2500 2000	2000 2000	1200 -	1900	2000	2000	1500	r/min	
Max torque with recommended drive at nominal speed (DS2000, μ DS)	2	4.5	7.8	15	19	6.7	12	25	44	Nm	
Nominal torque, continuous duty nominal speed, ($\Delta\theta$ win = 110K°)	1.1	2.3	3.8	6.3	8.1	4.7	8.2	11.8	18.8	Nm	
Output power, continuous duty nominal speed, ($\Delta\theta$ win = 110K°)	0.90	1.30	1.68	2.16	2.55	2.3	3.41	4.21	5.51	kW	
Rotor inertia (resolver included)	1.05	1.55	2.60	4.70	6.80	4.60	8.00	11.50	18.40	Kgcm ²	
Weight (without brake)	3	3.6	4.7	6.9	9.1	7.7	9.9	12.1	16.6	Kg	
Torque constant	0.50	0.60	1.15	1.43	1.99	1.12	1.47	1.39	1.75	Nm/Arms	
Winding resistance at 20°C (phase to phase)	6.7	2.8	3.8	2.4	2.8	2.85	1.60	0.76	0.59	Ohm	
Winding inductance (phase to phase)	12.0	7.1	11.8	9.4	10.6	12.5	10.7	5.8	4.8	mH	
Nominal current, locked rotor	3.0	4.9	4.3	5.8	5.6	5.5	7.8	12.0	15.0	Arms	
Standard motor length ^(*)	134	147	172	223	274	170	195	220	271	mm	
Square flange side	100	100	100	100	100	140	140	140	140	mm	

Characteristics and nominal values with sinusoidal drive	G466					Unit
	2xx	4xx	6xx	8xx	9xx	
Stack length	L15	L30	L45	L60	L90	
Nominal torque, continuous duty, locked rotor ($\Delta\theta$ win = 110K°)	14.4	27.8	40.1	52.4	76.6	Nm
Nominal speed	3850	3000	2900	2400	2400	r/min
Recommended drive DS2000	25/49	30/64	30/64	30/64	50/99	DriveType
Max torque	40	80	120	160	240	Nm
Max torque with recom. drive DS2000	40	69	94	125	204	Nm
Cutoff speed with recom. drive DS2000	1800	1900	1600	1200	1100	r/min
Max torque with recommended drive at nominal speed (DS2000)	24	50	62	76	105	Nm
Nominal torque, continuous duty nominal speed, ($\Delta\theta$ win = 110K°)	10.5	19.0	25.2	36.1	47.7	Nm
Output power, continuous duty nominal speed, ($\Delta\theta$ win = 110K°)	4.23	5.98	7.65	9.07	11.99	kW
Rotor inertia (resolver included)	27.2	52.1	77.0	102	152	Kgcm ²
Weight (without brake)	15.1	21.1	27.1	33.1	40	Kg
Torque constant	0.98	1.21	1.59	2.12	2.27	Nm/Arms
Winding resistance at 20°C (phase to phase)	0.53	0.28	0.26	0.32	0.22	Ohm
Winding inductance (phase to phase)	4.5	3.2	3.7	4.8	3.5	mH
Nominal current, locked rotor	14.7	23.0	25.3	24.7	33.7	Arms
Standard motor length ^(*)	187	225	264	301	376	mm
Square flange side	190	190	190	190	190	mm

Notes :

(•) ambient at 25°C in still air; motor mounted on a steel plate of 300x300x12 mm

(*)

brake increases motor length by:
 - 17 mm for G462 series
 - 22 mm for G463 series
 - 21 mm for G464 series
 - 15 mm for G465 series
 - 37 mm for G466 series



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