

HG Servo Motor Model Number Configurations

HG 1 2 3 - 4

1 Rated Output and Maximum Rotation Speed

Number	Rated Output	Max. Rotation Speed	Flange Size (mm)	Stocked Item
54	0.5 kW	4000 r/min	130 SQ.	S
104	1.0 kW	4000 r/min	130 SQ.	-
154	1.5 kW	4000 r/min	130 SQ.	S
224	2.2 kW	4000 r/min	130 SQ.	-
204	2.0 kW	4000 r/min	176 SQ.	S
354	3.5 kW	4000 r/min	176 SQ.	S
123	1.2 kW	3000 r/min	130 SQ.	-
223	2.2 kW	3000 r/min	130 SQ.	-
303	3.0 kW	3000 r/min	176 SQ.	-
453	4.5 kW	3500 r/min	176 SQ.	S
703	7.0 kW	3000 r/min	176 SQ.	S
903	9.0 kW	3000 r/min	204 SQ.	-
142	1.4 kW	2000 r/min	130 SQ.	-
302	3.0 kW	2000 r/min	176 SQ.	-

2 Magnetic Brake

Symbol	Magnetic Brake
None	None
B	With magnetic brake

3 Shaft End Structure

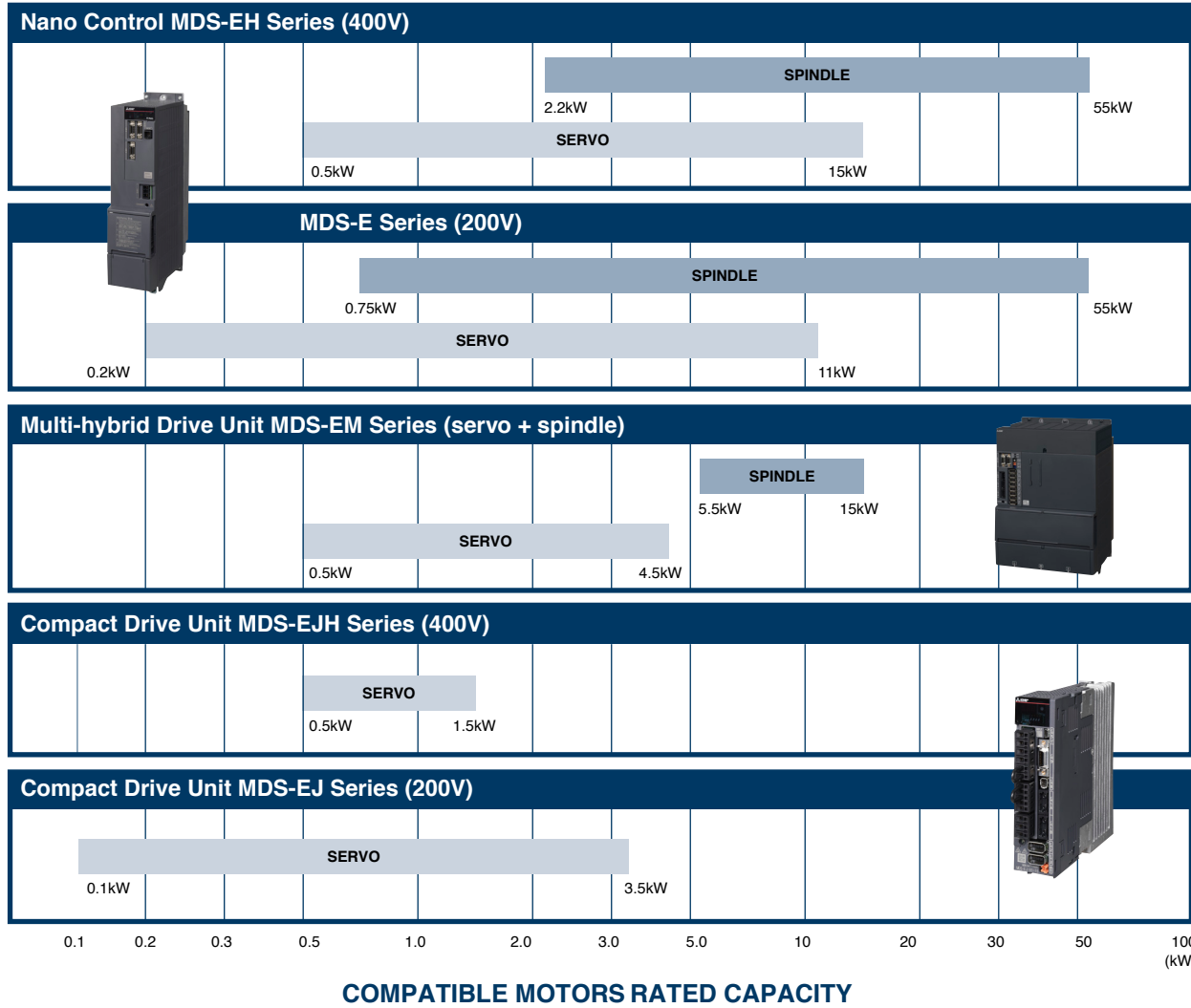
Symbol	Shaft End Structure	Stocked Item
S	Straight	S
T	Taper (*)	-

Note: "Taper" is available for the motor whose flange size is 90 SQ. mm or 130 SQ. mm.

4 Encoder

Symbol	Detection Method	Encoder Resolution	Stocked Item
D48	Absolute position	1,048,576 p/rev	S
D51		4,194,304 p/rev	-
D74		67,108,864 p/rev	-

MDS-E Series Drives and Motors



HG Servo Motor 200V

Model Number		HG54	HG104	HG154	HG224	HG204		HG354		
Compatible Drive Unit	1-Axis Type MDS-E-V1-	40	40	80	80	-	80	-	-	160
	2-Axis Type MDS-E-V2-	40, 80	40, 80	80, 160	80, 160	-	80, 160	-	-	160, 160W
	Multi Axis Integrated Type MDS-EM-SPV3-	10040	10040	xxx80* 200120	xxx80* 200120	-	xxx80* 200120	-	200120	-
	Regenerative Resistor Type MDS-EJ-V1-	30	40	80	80	80	-	100	-	-
Output (N·m)	Stall Torque	2.9	5.9	9.0	12.0	13.7	13.7	22.5	22.5	22.5
	Max. Torque	13	23.3	42.0	46.5	42.0	47.0	65.0	75.0	90.0
Rated Output (kW)		0.5	1.0	1.5	2.2	2.0		3.5		
Max. Rotation Speed (r/min)		4000	4000	4000	4000	4000		3500	4000	
Motor Inertia (x10 ⁻⁴ kg·m ²)		6.1	11.9	17.8	23.7	38.3		75.0		
Motor Inertia With Brake (x10 ⁻⁴ kg·m ²)		8.3	14.1	20.0	25.9	48.0		84.7		
Degree of Protection (The Shaft-Through Portion is Excluded)		IP67	IP67	IP67	IP67	IP67		IP67		
External Dimensions (Without Brake, Straight Shaft, D48 Encoder) Note: Total Length Will Be 3.5mm Longer When Using a D51or D74 Encoder. (W x H) mm		130 SQ x 118.5	130 SQ x 140.5	130 SQ x 162.5	130 SQ x 184.5	176 SQ x 143.5		176 SQ x 183.5		
Flange Fitting Diameter (mm)		ø110	ø110	ø110	ø110	ø114.3		ø114.3		
Shaft Diameter (mm)		ø24	ø24	ø24	ø24	ø35		ø35		
Weight (With Brake) kg		4.8 (6.8)	6.5 (8.5)	8.3 (10.3)	10.0 (12.0)	12.0 (18.0)		19.0 (25.0)		
Absolute Position Encoder Compatible Drive Unit	67,108,864 [p/rev] (D74)	E	E	E	E	-	E	-	-	E
	4,194,304 [p/rev] (D51)	E	E	E	E	-	E	-	-	E
	1,048,576 [p/rev] (D48)	E, EM, EJ	E, EM, EJ	E, EM, EJ	E, EM, EJ	EJ	E, EM	EJ	EM	E

General Notes:

1. Refer to "MDS-EM Series Multi-hybrid drive" in this Guide for compatible drive unit type.
2. Only the combination designated in this manual can be used for the motor and drive unit. Always use the designated combination.

HG Drive System Servo Motor 200V

Model Number		HG123	HG223	HG303	HG453	HG703	HG903	HG142	HG302
Compatible Drive Unit	1-Axis Type MDS-E-V1-	-	40	80	-	160	160W	20	40
	2-Axis Type MDS-E-V2-	-	40, 80	80, 160	-	160, 160W	160W	-	40, 80
	Multi Axis Integrated Type MDS-EM-SPV3-	-	10040	xxx80* 200120	200120	-	-	-	10040
	Regenerative Resistor Type MDS-EJ-V1-	40	40	80	-	-	-	-	40
Output (N·m)	Stall Torque	7.0	12.0	22.5	37.2	37.2	49.0	58.8	11.0
	Max. Torque	17.0	32.0	64.0	90.0	122.0	152.0	208.0	26.5
Rated Output (kW)		1.2	2.2	3.0	4.5	7.0	9.0	1.4	3.0
Max. Rotation Speed (r/min)		3000	3000	3000	3500	3000	3000	2000	2000
Motor Inertia (x10 ⁻⁴ kg·m ²)		11.9	23.7	75.0	112.0	154.0	196.0	17.8	75.0
Motor Inertia With Brake (x10 ⁻⁴ kg·m ²)		14.1	25.9	84.7	121.7	163.7	205.7	20.0	84.7
Degree of Protection (The Shaft-Through Portion is Excluded)		IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
External Dimensions (Without Brake, Straight Shaft, D48 Encoder) Note: Total Length Will Be 3.5mm Longer When Using a D51or D74 Encoder. (W x H) mm		130 SQ x 140.5	130 SQ x 184.5	176 SQ x 183.5	176 SQ x 223.5	176 SQ x 263.5	204 SQ x 330	130 SQ x 162.5	176 SQ x 183.5
Flange Fitting Diameter (mm)		ø110	ø110	ø114.3	ø114.3	ø114.3	ø180	ø110	ø114.3
Shaft Diameter (mm)		ø24	ø24	ø35	ø35	ø35	ø42	ø24	ø35
Weight (With Brake) kg		6.5 (8.5)	10.0 (12.0)	19.0 (25.0)	26.0 (32.0)	32.0 (38.0)	45.0 (51.0)	8.3 (10.3)	19.0 (25.0)
Absolute Position Encoder Compatible Drive Unit	67,108,864 [p/rev] (D74)	E	E	E	-	E	E	E	E
	4,194,304 [p/rev] (D51)	E, EJ	E, EM, EJ	E, EM, EJ	EM	E	E	E	E
	1,048,576 [p/rev] (D48)	E, EJ	E, EM, EJ	E, EM, EJ	EM	E	E	E, EJ	E, EM, EJ

General Notes:

1. Refer to "MDS-EM Series Multi-hybrid drive" in this Guide for compatible drive unit type.
2. Only the combination designated in this manual can be used for the motor and drive unit. Always use the designated combination.