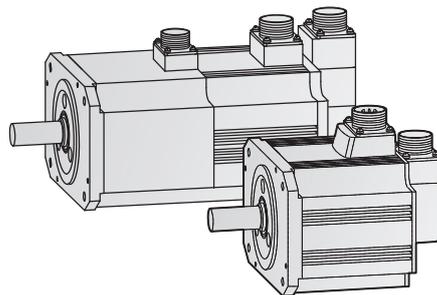
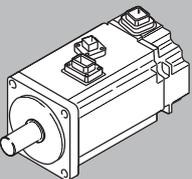
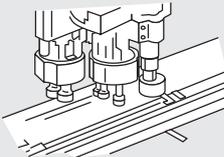
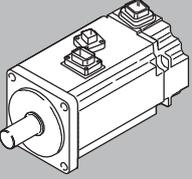
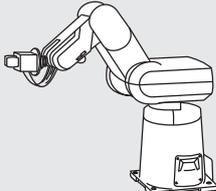
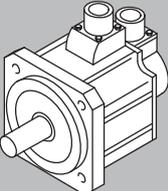
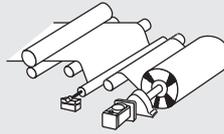
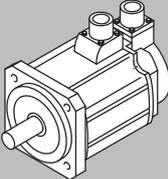
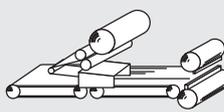
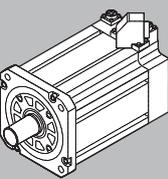


Servo motor features and typical applications

The recommended combinations of servo amplifiers and servo motors are listed in the tables below.

All servo motors are fitted with an absolute encoder and optionally available with an electromagnetic brake.



Model designation	Features	Application example	
M 	Ultra low inertia Small motor inertia moment makes this unit well suited for high-dynamic positioning operations with extra small cycle times.	<ul style="list-style-type: none"> ● Inserters, mounters, bonders ● Printed board hole openers ● In-circuit testers ● Label printers ● Knitting and embroidery machinery ● Ultra-small robots and robot tips 	 Inserters, mounters, bonders
K 	Low inertia Larger motor inertia moment makes this unit well suited for machines with fluctuating load inertia moment or machines with low rigidity such as conveyors.	<ul style="list-style-type: none"> ● Conveyors ● Food preparation machinery ● Printers ● Small loaders and unloaders ● Small robots and component assembly devices ● Small X-Y tables ● Small press feeders 	 Small robots
S 	Medium inertia Stable control is performed from low to high speeds, enabling this unit to handle a wide range of applications (e.g. direct connection to ball screw components).	<ul style="list-style-type: none"> ● Conveyor machinery ● Specialised machinery ● Robots ● Loaders and unloaders ● Winders and tension devices ● Turrets ● X-Y tables ● Test devices 	 Winders and tension devices
R 	Low inertia A compact sized low-inertia moment model with medium capacity. Well suited for high-frequency operation.	<ul style="list-style-type: none"> ● Roll feeders ● Loaders and unloaders ● High-frequency conveyor machinery 	
J 	Low Inertia (400 V) A 400 V Servo Motor for the MELSERVO-J3 Series for a power range up to 9 kW with low inertia and high speed. It has a compact size, is equipped with high resolution encoder and is compatible to global standards.	<ul style="list-style-type: none"> ● Food and Packaging ● Printing machine ● Pick up robot for Injection molding machine ● Palletizing machine ● General machine which require High speed and High frequency 	 Wrapping machinery

Note:
Other types of motors are available on request.

Servo motors overview

Motors for MR-J4 series servo amplifiers (200 V)

Motor series 200 V	Rated speed [r/min]	Max. speed [r/min]	Rated torque [Nm]	Max. torque [Nm]	Moment of inertia J [x10 ⁻⁴ kg m ²]	Rated output capacity [kW]	Servo motor model	Servo motor type		Amplifier pairing MR-J4											Art. no.						
								Voltage	Protective structure	10	20	40	60	70	100	200	350	500	700	11K		15K	22K				
HG-MR M	3000	6000	0.16	0.48	0.0162	0.05	HG-MR053	200 V AC	IP65	●														248661			
			0.32	0.95	0.0300	0.10	HG-MR13			●															248662		
			0.64	1.9	0.0865	0.20	HG-MR23				●															248663	
			1.3	3.8	0.142	0.40	HG-MR43					●														248664	
			2.4	7.2	0.586	0.75	HG-MR73						●														248665
HG-KR K	3000	6000	0.16	0.56	0.0450	0.05	HG-KR053	200 V AC	IP65	●														248651			
			0.32	1.1	0.0777	0.10	HG-KR13			●															248652		
			0.64	2.2	0.221	0.20	HG-KR23				●															248653	
			1.3	4.5	0.371	0.40	HG-KR43					●														248654	
			2.4	8.4	1.26	0.75	HG-KR73						●														248655
HG-SR S	2000	3000	2.4	7.2	7.26	0.50	HG-SR52	200 V AC	IP67				●											248671			
			4.8	14.3	11.6	1.00	HG-SR102							●											248672		
			7.2	21.5	16.0	1.50	HG-SR152								●											248673	
			9.5	28.6	46.8	2.00	HG-SR202									●											248674
			16.7	50.1	78.6	3.50	HG-SR352										●										248675
			23.9	71.6	99.7	5.00	HG-SR502											●									248676
			33.4	100	151	7.00	HG-SR702												●								248677
HG-JR J	3000	6000	1.6	4.8 <6.4> ^①	1.52	0.5	HG-JR53	200 V AC	IP67 ^④				●			● ^②									261539		
			2.4	7.2 <9.6> ^①	2.09	0.75	HG-JR73							●			● ^②								261540		
			3.2	9.6 <12.7> ^①	2.65	1.0	HG-JR103								●		● ^②									261541	
			4.8	14.3 <19.1> ^①	3.79	1.5	HG-JR153									●		● ^②									261542
			6.4	19.1 <25.5> ^①	4.92	2.0	HG-JR203									●		● ^②									261543
			10.5	32.0 <44.6> ^①	13.2	3.3 <3.5> ^③	HG-JR353										●		● ^②								261544
			15.9	47.7 <63.7> ^①	19.0	5.0	HG-JR503											●		● ^②							261545
	1500	5000	22.3	66.8	43.3	7.0	HG-JR703																			261546	
			28.6	85.8	55.8	9.0	HG-JR903																			261547	
		3000	70.0	210	220	11	HG-JR11K1M																			261557	
		2500	95.5	286	315	15	HG-JR15K1M																				261558
HG-RR R	3000	4500	140	420	489	22	HG-JR22K1M																	261559			
			3.2	8.0	1.50	1.0	HG-RR103							●										262896			
			4.8	11.9	1.90	1.5	HG-RR153							●										262897			
			6.4	15.9	2.30	2.0	HG-RR203								●										262898		
			11.1	27.9	8.30	3.5	HG-RR353									●									262899		
15.9	39.8	12.0	5.0	HG-RR503										●								262900					

① The value in angle brackets is applicable when the maximum torque is increased. The maximum torque will be increased by changing the servo amplifier to be combined (see ②).

② This combination of the HG-JR servo motor and the servo amplifier increases the maximum torque from 300 % to 400 % of the rated torque.

③ The value in angle brackets is applicable when the servo motor is used with MR-J4-500B or MR-J4-500A.

④ 22 kW of HG-JR series is rated IP44

Motors for MR-J4 series servo amplifiers (400 V)

Motor series 400 V	Rated speed [r/min]	Max. speed [r/min]	Rated torque [Nm]	Max. torque [Nm]	Moment of inertia J [x10 ⁻⁴ kg m ²]	Rated output capacity [kW]	Servo motor model	Servo motor type		Amplifier pairing MR-J4												
								Voltage	Protective structure	60	100	200	350	500	700	11K	15K	22K	Art. no.			
HG-SR S	2000	3000	2.4	7.2	7.26	0.5	HG-SR524	400 V AC	IP67	●										261431		
			4.8	14.3	11.6	1.0	HG-SR1024				●									261432		
			7.2	21.5	16.0	1.5	HG-SR1524					●									261433	
			9.5	28.6	46.8	2.0	HG-SR2024						●									261434
			16.7	50.1	78.6	3.5	HG-SR3524							●								261435
			23.9	71.6	99.7	5.0	HG-SR5024								●							261436
			33.4	100	151	7.0	HG-SR7024									●						261437
HG-JR J	3000	6000	1.6	4.8 <6.4> ^①	1.52	0.5	HG-JR534	400 V AC	IP67 ^④	●	● ^②									261445		
			2.4	7.2 <9.6> ^①	2.09	0.75	HG-JR734				●	● ^②									261446	
			3.2	9.6 <12.7> ^①	2.65	1.0	HG-JR1034				●	● ^②									261447	
			4.8	14.3 <19.1> ^①	3.79	1.5	HG-JR1534					●	● ^②									261448
			6.4	19.1 <25.5> ^①	4.92	2.0	HG-JR2034					●	● ^②									261449
			10.5	32.0 <44.6> ^①	13.2	3.3 <3.5> ^③	HG-JR3534						●	● ^{②③}								261450
			15.9	47.7 <63.7> ^①	19.0	5.0	HG-JR5034							●	● ^②							261451
		5000	22.3	66.8	43.3	7.0	HG-JR7034								●							261452
			28.6	85.8	55.8	9.0	HG-JR9034									●						261453
			70.0	210	220	11	HG-JR11K1M4										●					261384
		1500	3000	95.5	286	315	15			HG-JR15K1M4								●				261535
				2500	140	420	489			22	HG-JR22K1M4									●		261536

① The value in angle brackets is applicable when the maximum torque is increased. The maximum torque will be increased by changing the servo amplifier to be combined (see^②).

② This combination of the HG-JR servo motor and the servo amplifier increases the maximum torque from 300% to 400% of the rated torque.

③ The value in angle brackets is applicable when the servo motor is used with MR-J4-500B or MR-J4-500A.

④ 22 kW of HG-JR series is rated IP44

Motors for MR-ES series servo amplifiers

Motor series	Rated speed [r/min]	Max. speed [r/min]	Rated torque [Nm]	Max. torque [Nm]	Moment of inertia J [x10 ⁻⁴ kg m ²]	Rated output capacity [kW]	Servo motor model	Servo motor type		Amplifier pairing MR-E						Art. no.	
								Voltage	Protective structure	10A 10AG	20A 20AG	40A 40AG	70A 70AG	100A 100AG	200A 200AG		
HF-KN K	3000	4500	0.32	0.95	0.088	0.1	HF-KN13	200 V AC	IP65	●							239797
			0.64	1.9	0.24	0.2	HF-KN23K				●						253946
			1.3	3.8	0.42	0.4	HF-KN43K					●					253947
			2.4	7.2	1.43	0.75	HF-KN73JK						●				253948
HF-SN S	2000	3000	2.39	7.16	6.1	0.5	HF-SN52JK	200 V AC	IP67				●				253952
			4.77	14.3	11.9	1.0	HF-SN102JK						●				253953
			7.16	21.5	17.8	1.5	HF-SN152JK							●			253954
			9.55	28.6	38.3	2.0	HF-SN202JK								●		253965