

1-2 kW Mitsubishi brushless servo motors

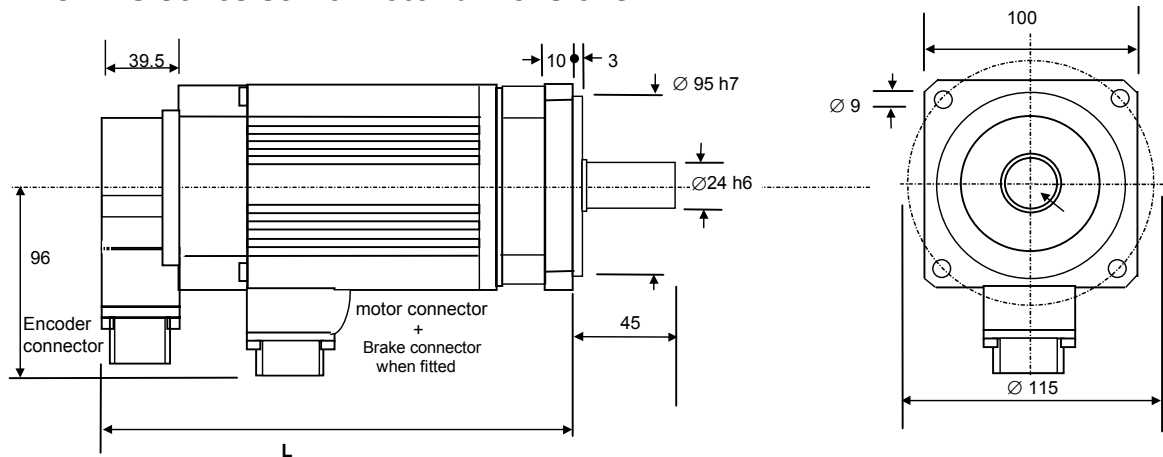
HC-RFS series

The HC-RFS series of Brushless servo motors have been developed specifically for use with the compact Mitsubishi MEL MR-J2S Super packaged brushless drive and offer the following key features:

- High power / volume ratio
- Maintenance-free 3 phase brushless construction
- 100 mm square frame size offering 3 power options up to 2kW.
- Low inertia rotor for high acceleration & rapid reversals
- Encoder commutation facilitates Sinewave drive technology for smooth operation and high resolution of 131072 counts/rev.
- High thermal dissipation characteristics for cool running
- Optional Integral Parking brake



Mitsi HC-RFS series servo motor dimensions:



Alternative Length options:.(Dimension 'L')

Motor	HC RFS 103	HC RFS 153	HC RFS 203
Motor Body length	147	172	197
Motor-brake body length (add 'B' to part number)	185	210	235

Specification & performance using MEL-Servo MR-J2S brushless drivers

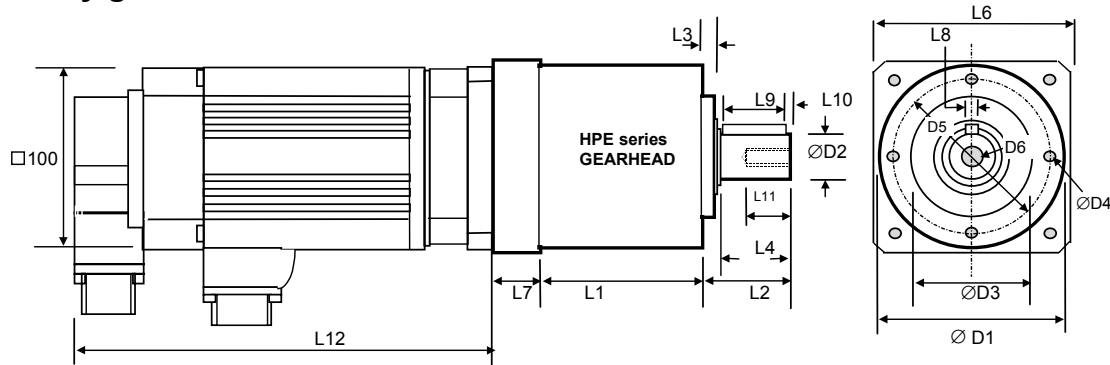
Motor Options:		HC RFS 103	HC RFS 153	HC RFS 203
Matched MEL Drive		MR J2S-200A	MR J2S-200A	MR J2S-200A
Rated Torque	Nm	3.18	4.78	6.37
Peak Torque	Nm	7.95	11.9	15.9
Output Power	kW	1.0	1.5	2.0
Rotor Inertia	Kgcm ²	1.5	1.9	2.3
Mass	kg	3.9	5.0	6.2
Mass with brake		6.0	7.0	8.3
Maximum Continuous Speed		4,500 rpm		
Rated Speed		3,000 rpm		
Integral encoder		dual track, resolution: 131072 counts per rev.		
Maximum load/motor inertia ratio		5 times using MR-J2S super brushless servo drive unit		
Enclosure		totally enclosed protected to IP65, self cooling		
Integral Parking Brake		Optional		
Ambient temperature range		0 to + 40 deg. C		

Planetary geared brushless servo motors

HPE/HC-RFS series

- High peak torque provides high acceleration & deceleration capability
- Capable of withstanding factor 2 emergency shock loads without damage
- Low backlash construction provides accurate positioning and long life
- High torsional rigidity for stable operation in high speed positioning.
- Low torque ripple for smooth operation in velocity servo applications
- Planetary construction for high torque to volume ratio
- High reliability and serviceability

Planetary geared servo motor dimensions:



Gearhead Motor	HPE 90		HPE 120	
	HC RSF103	HC RSF153	HC RSF203	HC RSF203
Gearbox Version	HPE90S		HPE120S	HPE120D
Gearbox Diameter	D1	90	120	
Output shaft diameter	D2	22 k6	32 k6	
Gearbox mounting register	D3	68 h6	90 h6	
Gearbox mounting holes	D4	4 M6 12 deep	4 x M8	
mounting hole PCD	D5	80	108	
Shaft fixing bolt diameter	D6	Tapped M8	Tapped M12	
Gearbox Length	L1	80	106	142
Overall Output Shaft length	L2	46	70	
Gearbox register length	L3	5	6	
Free shaft length	L4	36	58	
Motor flange size	L6	100	120	
Adaptor length	L7	32 maximum	28	
Output shaft key width	L8	6 h9	10 h9	
Output shaft Key length	L9	32	50	
Key distance to shaft end	L10	2	4	
Shaft fixing tapped length	L11	13	22	
Motor body length	L12	See motor data		

Typical performance of geared servo motor options

Gearbox Model	Gear Ratio n:1	Motor Model	Rated Speed (rpm)	Rated Torque (Nm)	Peak Torque (Nm)	Maximum Emergency Torque (Nm)	Max. Backlash (arc. min.)	Assembly Mass (Kg)
HPE 90 S	5	HC RFS153	600	21	56	56	≤ 12	9.3
	5	HC RFS203	600	29	75	75		10.5
	10	HC RFS153	300	40	72	112		9.3
HPE120S	10	HC RFS203	250	54	146	146	≤ 12	15.4
HPE120D	25	HC RFS103	100	56	168	168	≤ 15	15.3
		HC RFS153	100	93	210	260		16.4
		HC RFS203	100	120	210	360		17.6
	50	HC RFS103	50	111	210	336		15.3
		HC RFS153	50	120	210	480		16.4

For ultra low backlash specify Omagear HP series gearhead