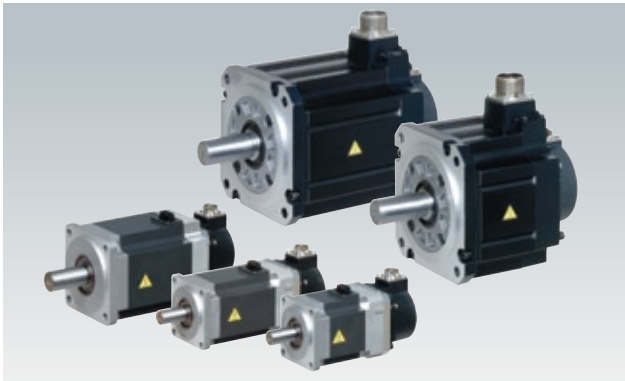


**MITSUBISHI CNC TOOL SPINDLE MOTORS
HF-KP/HF-SP Series**
New product
HF-KP/HF-SP Series compact servo motors appropriate for tool spindles

High speed

Maximum rotation speed of 6,000r/min has been achieved by adopting a high-speed rotor.

Compact

Outputs from 0.4kW to 4.0kW are available with flange sizes from 60mm to 130mm.

**Improved environment-proof structure
and easier maintenance**

Oldham coupling is used for connecting the motor shaft and detector shaft, improving vibration resistance and simplifying maintenance.

HF-KP Series (small capacity)
Explanation of type



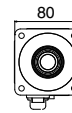
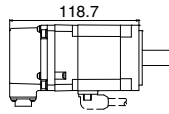
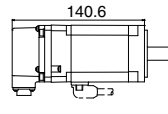
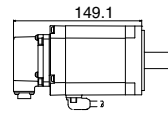
HF-KP ① J ② W09

① Rated output and maximum rotation speed

Symbol	Rated output	Max. rotation speed	Flange size (mm)
46	0.4 kW	6000 r/min	60 SQ.
56	0.5 kW	6000 r/min	60 SQ.
96	0.9 kW	6000 r/min	80 SQ.

② Option

Symbol	Option
None	Without keyway
K	With keyway (with key)

Motor type		HF-KP46	HF-KP56	HF-KP96
Compatible drive unit	1-axis type	MDS-D-SP-20	MDS-D-SP-20	MDS-D-SP-20
	2-axis type (Note 2)	MDS-D-SP2-2020 MDS-D-SP2-4020	MDS-D-SP2-2020 MDS-D-SP2-4020	MDS-D-SP2-2020 MDS-D-SP2-4020
	Regenerative resistor type	MDS-D-SPJ3-075	MDS-D-SPJ3-075	MDS-D-SPJ3-075
Output [N·m]	8 6 4 2 0			
Rated torque		0.64	0.80	1.43
Max. torque		2.50	5.00	6.50
Rated output [kW]		0.40	0.50	0.90
Maximum rotation speed [r/min]		6000	6000	6000
Motor inertia [kg·cm ²]		0.24	0.42	1.43
Protection level (The shaft-through portion is excluded.)		IP67	IP67	IP67
Outline dimension drawing [mm]				
				
Flange fitting diameter [mm]		ø50	ø50	ø70
Shaft diameter [mm]		ø14	ø14	ø19
Mass [kg]		1.2	1.7	2.9

(Note 1) This motor produces heat of about 100°C during high-speed rotation even when no load is connected.

Mount the motor on a machine-side flange which has an appropriate size for sufficient heat dissipation.

(Note 2) A 2-axis drive unit drives two tool spindle motors only. A spindle motor other than tool spindle motor is not usable.

HF-SP Series (medium capacity)

Explanation of type



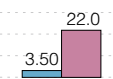
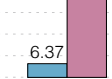
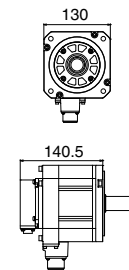
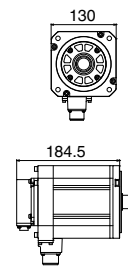
HF-SP ① J ② W09

① Rated output and maximum rotation speed

Symbol	Rated output	Max. rotation speed	Flange size (mm)
226	2.2 kW	6000 r/min	130 SQ.
406	4.0 kW	6000 r/min	130 SQ.

② Option

Symbol	Option
None	Without keyway
K	With keyway (without key)

Motor type		HF-SP226	HF-SP406
Compatible drive unit	1-axis type	MDS-D-SP-80	MDS-D-SP-160
	2-axis type ^(Note 2)	MDS-D-SP2-8040 MDS-D-SP2-8080 MDS-D-SP2-16080	MDS-D-SP2-16080
	Regenerative resistor type	—	—
Output	[N·m]		
	Rated torque  Max. torque 		
Rated output	[kW]	2.2	4.0
Maximum rotation speed	[r/min]	6000	6000
Motor inertia	[kg·cm ²]	11.9	23.7
Protection level (The shaft-through portion is excluded.)		IP67	IP67
Outline dimension drawing [mm]			
Flange fitting diameter	[mm]	ø110	ø110
Shaft diameter	[mm]	ø24	ø24
Mass	[kg]	6.8	10

(Note 1) This motor produces heat of about 100°C during high-speed rotation even when no load is connected.

Mount the motor on a machine-side flange which has an appropriate size for sufficient heat dissipation.

(Note 2) A 2-axis drive unit drives two tool spindle motors only. A spindle motor other than tool spindle motor is not usable.

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BNP-A1221-B[ENG]
(ENGLISH)

Revised publication, effective Aug. 2010.
 Superseding publication of K-KL2-0-B0073-A May 2010.
 Specifications are subject to change without notice.