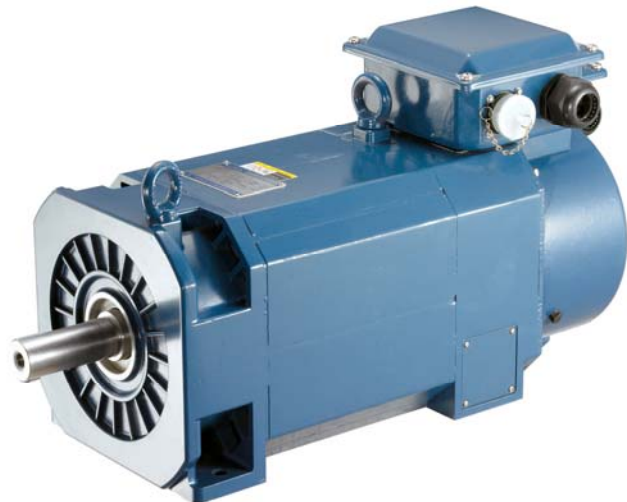


DAP01/ZJY AC SERVO SPINDLE MOTOR & DRIVER UNIT

With timing range, short speed fluctuation and short starting/braking time, DAP01 AC Spindle Drive unit developed realizes digital vector control of AC asynchronous motor to gain exact positioning of AC asynchronous motor. It is the optimum choice to improve performance and reduce cost of CNC machine.

Characteristics:

- High performance DSP and CPLD to realize digital control and high reliability;
- High voltage DC busbar (600V), strong power IPM, excellent dynamic response;
- Asynchronous motor vector, wide valid timing range and short speed fluctuation;



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DAP01 Technical Specifications:

Drive unit type	DAP01-37	DAP01-55	DAP01-75	DAP01-110
Continuous output power (S1)	3.7kW	5.5 kW	7.5 kW	11 kW
30min output power (S3)	5.5 kW	7.5 kW	11 kW	15 kW
Input power supply	3 -phase (0.8~1.1)×380V 50 Hz /60 Hz			
Adaptive motor	3-phase AC380V AC spindle motor matching with 1024p/r incremental rotational encoder and AC cooling fan; standard motor			
Operating mode	Internal speed run, external speed run, Jog, trial run			
Constant torque timing ratio	1000:1 (corresponding adaptive motor speed: 1.5~1500r/min)			
Constant power timing ratio	6:1 (corresponding adaptive motor speed: 1500~9000r/min)			
Stable speed precision	Base speed (rated speed) x 0.1%			
Speed control mode	Speed closed loop control with speed feedback			
External speed command input	-10V~+10V or 0~10 V CW/CCW			
Speed feedback input	1024 p/r incremental rotational encoder, A/B/Z differential signal			
Orientation control	Setting 8 positioning points of motor encoder or spindle encoder and external contact signal selecting the positioning point and starting motor (spindle) positioning, and its positioning angle ≤ 180 /encoder lines			
Spindle position feedback input	Incremental rotational encoder, lines 128 p/r ~8000 p/r, A/B/Z differential signal			
Position feedback output	Motor encoder or spindle encoder signal 1:1 output, A/B/Z differential signal			
Control input signal	11 input points including servo enabling/zero speed clamping/clockwise rotation/counterclockwise rotation/speed (positioning point) Selection/positioning starting			
Control output signal	7 output points including alarm/ready OK/ motor power/speed in-position/positioning completion/zero of motor pulse in Z direction			
Protection function	Protection form overvoltage, undervoltage, overspeed, overcurrent, overload, overheat, abnormal encoder			
Display function	6 bit LED, displaying software/ hardware version, operating mode, current speed, speed command, encoder position/state, current, torque, I/O state, busbar voltage, alarm code, parameter			
Operating function	5 keys to select operating mode, displaying content, modifying, copying and recovering			
External energy consumption brake resistance	45Ω/500w		45Ω/1200w	
Temperature and humidity of storage and delivery	-40℃~80℃, below 90% RH (no dewing)			
Operating temperature, humidity	-10℃~55℃ (no freezing), below 90% RH (no dewing)			
Vibration	$\leq 0.6G$ (5.9m/s ²)			
Guard level	IP20 (in no corrosive or flammable gas, water, oil mist or dusty)			
Outline dimension	212 mm x 347 mm x 215mm			

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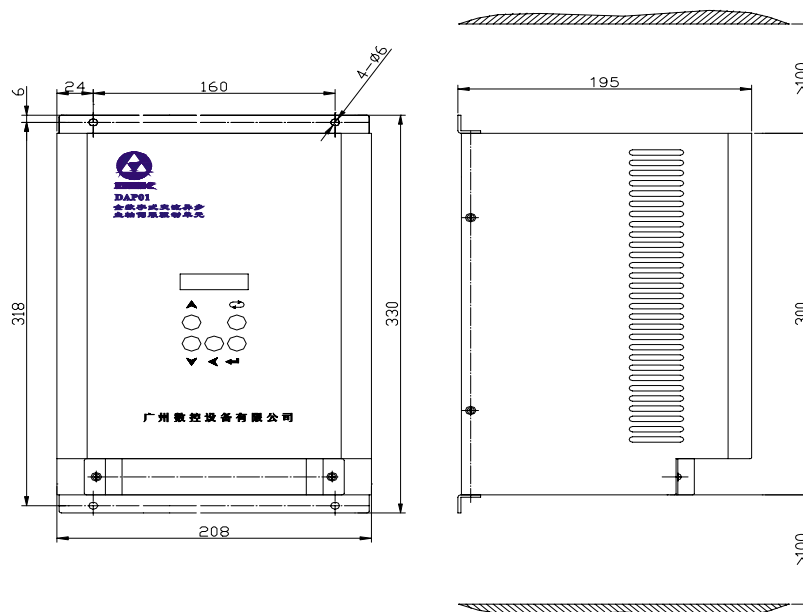
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Note 1: spindle motor with special polarities and base frequency should be ordered especially, and the matched servomotor should be employed with exclusive software;

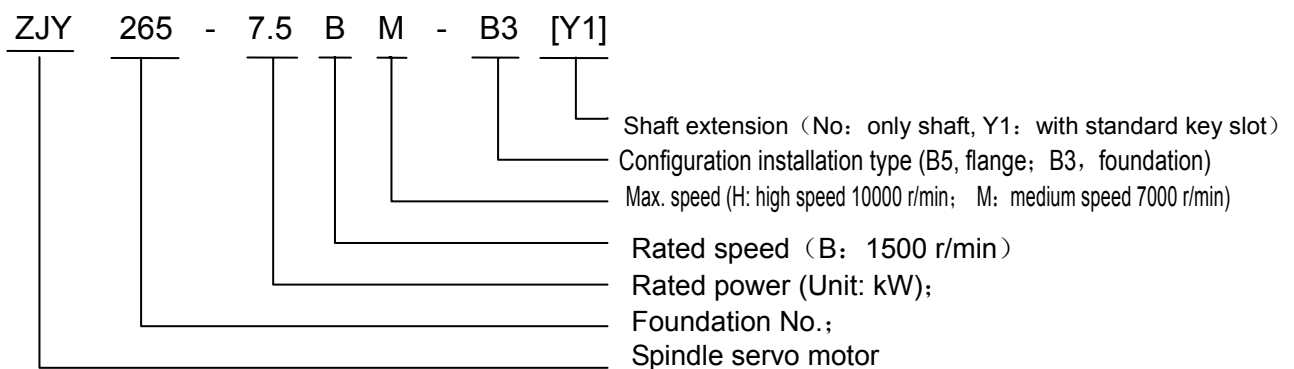
Note 2: when driving ratio of the spindle motor and the spindle is 1:1, the drive unit can complete exactly positioning of spindle without connecting with spindle encoder; if it is not 1:1, the drive unit cannot complete the positioning without connection.

DAP01 outline, installing dimension:



Motor Model Significance

Example: ZJY265-7.5BM-B3[Y1]



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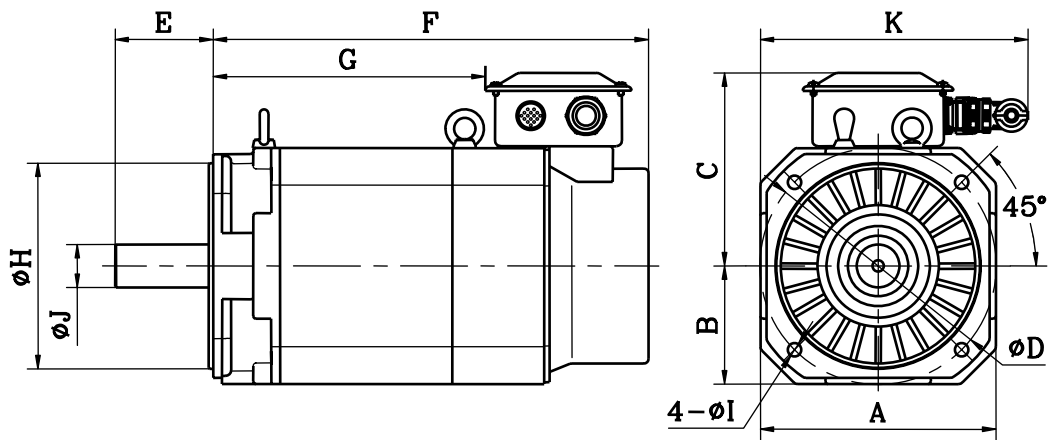
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Specification Items	ZJY208-2.2B (Substitution of ZJY132-2.2)	ZJY208-3.7B (Substitution of ZJY132-3.7)	ZJY208-5.5B (Substitution of ZJY132-5.5)	ZJY208-7.5B (Substitution of ZJY132-7.5)	ZJY265-7.5B (Substitution of ZJY160-7.5)	ZJY265-11B (Substitution of ZJY160-11)	ZJY265-1B (Substitution of ZJY160-15)	
Rated power (kW)	2.2	3.7	5.5	7.5	7.5	11	15	
Drive unit voltage (V)	3-phase AC 380							
Rated current (A)	9.3	8.9	13.7	18.4	18	26	35	
Rated frequency (Hz)	50	50	50	50	50	50	50	
Rated torque (N·m)	14	24	35	48	49	72	98	
30min power (kW)	3.7	5.5	7.5	11	11	15	18.5	
30min current (A)	13.6	13	18	25	26	34	42	
30min torque (N·m)	24	35	48	70	74	100	123	
Rated speed (r/min)	1500	1500	1500	1500	1500	1500	1500	
Constant power range (r/min)	When max. speed is H: 1500~6000; When max. speed is M: 1500~5000							
Max. speed (r/min)	M,H	M,H	M,H	M,H	M	M	M	
Moment inertia (kg·m ²)	0.0103	0.0168	0.0238	0.0309	0.0413	0.0744	0.0826	
Weight (kg)	49	51	66	77	89	107	125	
Installation type	IM B5 or B3							
Protection degree	IP54 (GB/T 4942.1—2001)							
Insulation degree	F (GB 1094.3—2003)							
Vibration degree	R (GB 10068—2000)							
Imbedded encoder	Incremental 1024 p/r							
Cooling fan power (V)	3-phase AC 380V 50Hz 40W 0.14A				3-phase AC 380V 50Hz 70W 0.21A			
External dimensions (See figures)	A	208	208	208	208	265	265	265
	B	104	104	104	104	132	132	132
	C	188	188	188	188	216	216	216
	D	215	215	215	215	265	265	265
	E	60	60	80	80	110	110	110
	F	363	413	468	523	443	488	533
	G	187	237	292	347	260	305	350
	H	180h7	180h7	180h7	180h7	230h7	230h7	230h7
	I	15	15	15	15	15	15	15
	J	28h6	28h6	38h6	38h6	48h6	48h6	48h6
	K	272	272	272	272	300	300	300
	L	106	106	106	106	135	135	135
	N	180	180	180	180	230	230	230
	P	40	40	40	40	40	40	40
Q	160	210	265	320	225	270	315	
Z	12	12	12	12	15	15	15	

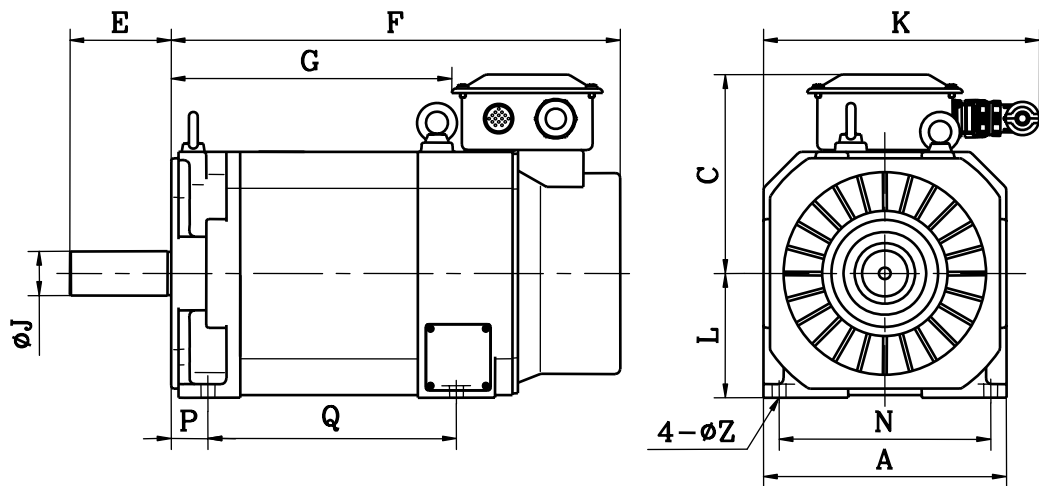
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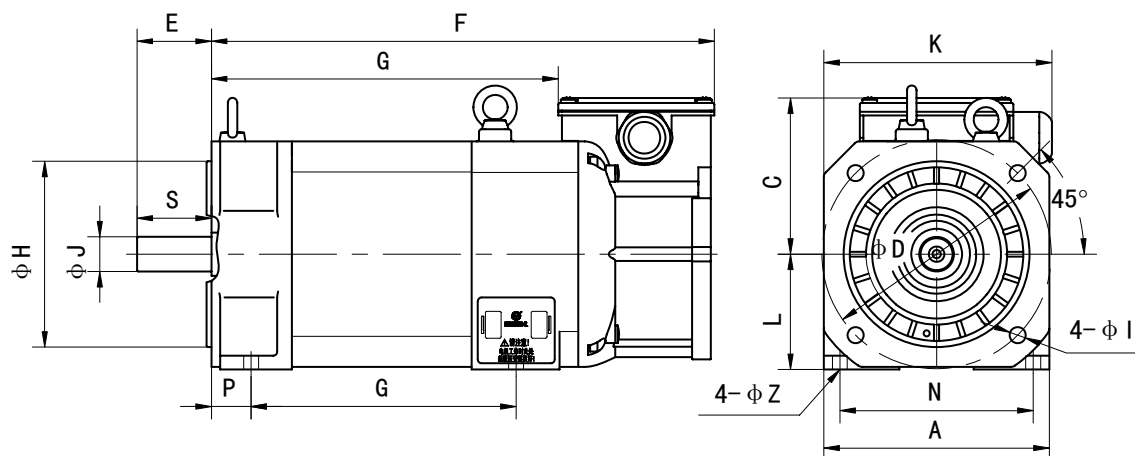
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Flange installation type (B5)



Foundation installation type (B3)



Flange installation type and Foundation installation type (B35)

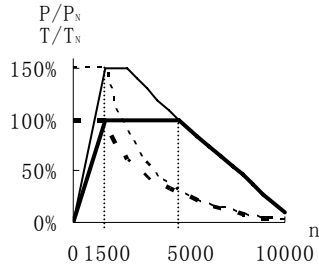
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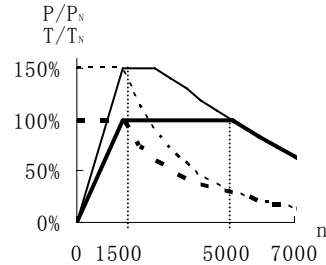
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Motor Mechanical Characteristic Curve

P/P_N ——— Power/Rated power ; T/T_N ——— Torque/ Rated torque;
 n ——— Rated speed



ZJY208 Series



ZJY265 Series

In figure:

_____ Power in continuous running ; _____ Power for 30 minutes running;
 - - - - - Torque in continuous running; - - - - - Torque for 30 minutes running.