

B AC Motors

S.C. Induction Motor 120W (□90mm)

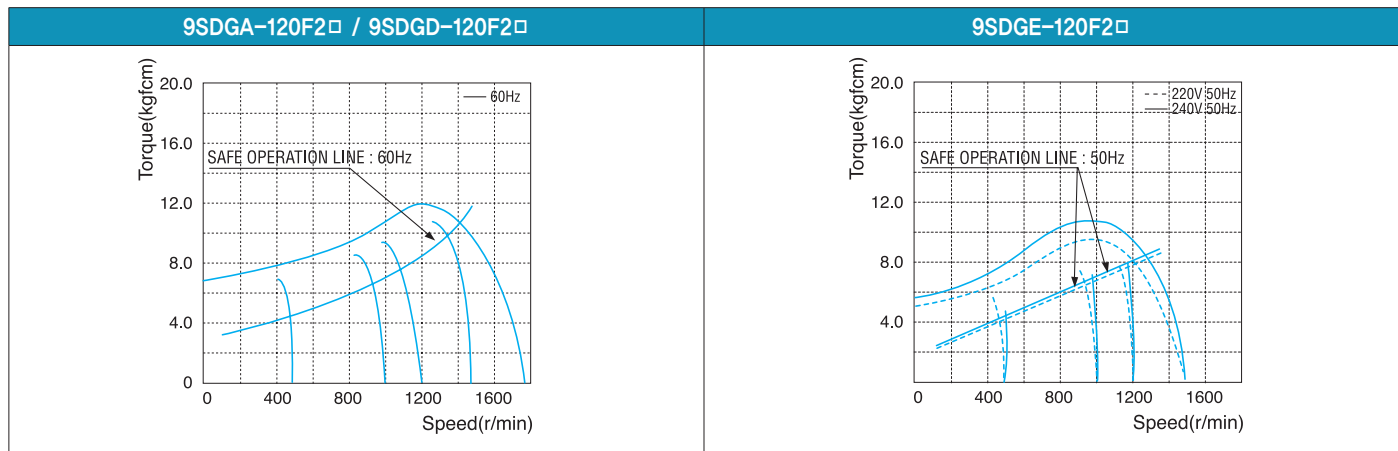
120W Speed Control Induction Motor 120W(□90mm)

Motor Specification

Model 9SDG*-120F2□: Gear Type Shaft 9SDD*-120F2: D-Cut Type Shaft 9SDK*-120F2: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque		Permissible Torque				Capacitor μF / VAC
									1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
9SDGA-120F2□	120	1φ110	60	4	Cont.	90-1700	7.80	0.780	7.50	0.750	4.20	0.420	25.0 / 250
9SDGD-120F2□	120	1φ220	60	4	Cont.	90-1700	7.80	0.780	7.50	0.750	4.20	0.420	6.0 / 400
9SDGE-120F2□	120	1φ220	50	4	Cont.	90-1400	5.60	0.560	7.20	0.720	4.00	0.400	6.5 / 400
		6.50					0.650	7.90	0.790	4.00	0.400		

- 1) Enter the phase & voltage code in the place * and enter the model type of attaching Gearbox in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) Gear Type Shaft are for attaching Gearbox and D-Cut & Key Type Shaft are for using motor only.

Speed-Torque Characteristics



Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200				
9SDG□ -120F2P	9PBK □BH	1200	110	60	kgfcm	12.5	18.7	22.4	31.1	37.4	46.7	56.0	70.3	84.4	101.3	102.0	127.5	153.0	183.6	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0			
					N.m	1.22	1.83	2.20	3.05	3.66	4.58	5.49	6.89	8.27	9.92	10.00	12.50	14.99	17.99	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		220/240	50	kgfcm	12.0	17.9	21.5	29.9	35.9	44.8	53.8	67.5	81.0	97.2	97.9	122.4	146.9	176.3	195.8	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
				N.m	1.17	1.76	2.11	2.93	3.51	4.39	5.27	6.62	7.94	9.53	9.60	12.00	14.39	17.27	19.19	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		9PFK □BH	1200	110	60	kgfcm	7.0	10.5	12.5	17.4	20.9	26.1	31.4	39.4	47.3	56.7	57.1	71.4	85.7	102.8	114.2	142.8	171.4	192.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
						N.m	0.68	1.02	1.23	1.71	2.05	2.56	3.07	3.86	4.63	5.56	5.60	7.00	8.40	10.08	11.20	13.99	16.79	18.83	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
	220/240		50	60	kgfcm	7.0	10.5	12.5	17.4	20.9	26.1	31.4	39.4	47.3	56.7	57.1	71.4	85.7	102.8	114.2	142.8	171.4	192.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
					N.m	0.68	1.02	1.23	1.71	2.05	2.56	3.07	3.86	4.63	5.56	5.60	7.00	8.40	10.08	11.20	13.99	16.79	18.83	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
	220/240		50	60	kgfcm	6.6	10.0	12.0	16.6	19.9	24.9	29.9	37.5	45.0	54.0	54.4	68.0	81.6	97.9	108.8	136.0	163.2	183.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
					N.m	0.65	0.98	1.17	1.63	1.95	2.44	2.93	3.68	4.41	5.29	5.33	6.66	8.00	9.60	10.66	13.33	15.99	17.93	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the Gearbox model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite direction.
- 4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.
The actual speed is 2~20% less than the displayed value, depending on the size of the load.

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200		
9SDG□ -120F2H	9HBK □BH 9HFK □BH	1200	110	60	kgfcm N.m	18.7 1.83	22.4 2.20	37.4 3.66	56.0 5.49	70.3 6.89	84.4 8.27	101.3 9.92	102.0 10.00	127.5 12.50	153.0 14.99	183.6 17.99	255.0 24.99	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40		
			220	60	kgfcm N.m	18.7 1.83	22.4 2.20	37.4 3.66	56.0 5.49	70.3 6.89	84.4 8.27	101.3 9.92	102.0 10.00	127.5 12.50	153.0 14.99	183.6 17.99	255.0 24.99	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	
			220/ 240	50	kgfcm N.m	17.9 1.76	21.5 2.11	35.9 3.51	53.8 5.27	67.5 6.62	81.0 7.94	97.2 9.53	97.9 9.60	122.4 12.00	146.9 14.39	176.3 17.27	244.8 23.99	293.8 28.79	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
		90	110	60	kgfcm N.m	10.5 1.02	12.5 1.23	20.9 2.05	31.4 3.07	39.4 3.86	47.3 4.63	56.7 5.56	57.1 5.60	71.4 7.00	85.7 8.40	102.8 10.08	139.9 13.99	167.9 16.79	188.3 18.83	226.0 22.60	251.1 25.11	294.0 29.40	300.0 30.00	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
			220	60	kgfcm N.m	10.5 1.02	12.5 1.23	20.9 2.05	31.4 3.07	39.4 3.86	47.3 4.63	56.7 5.56	57.1 5.60	71.4 7.00	85.7 8.40	102.8 10.08	139.9 13.99	167.9 16.79	188.3 18.83	226.0 22.60	251.1 25.11	294.0 29.40	300.0 30.00	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
			220/ 240	50	kgfcm N.m	10.0 0.98	12.0 1.17	19.9 1.95	29.9 2.93	37.5 3.68	45.0 4.41	54.0 5.29	54.4 5.33	68.0 6.66	81.6 8.00	97.9 9.60	136.0 13.33	163.2 15.99	183.0 17.93	219.6 21.52	244.0 23.91	292.8 28.69	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SDG□ -120F2W	9WD□BL/ □BR/□BRL	1200	110	60	kgfcm N.m	61.5 6.03	72.0 7.06	86.6 8.49	99.9 9.79	131.3 12.86	148.5 14.55	153.1 15.00	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	61.5 6.03	72.0 7.06	86.6 8.49	99.9 9.79	131.3 12.86	148.5 14.55	153.1 15.00	142.9 14.00	122.4 12.00
			220/240	50	kgfcm N.m	59.0 5.79	69.1 6.77	83.2 8.15	95.9 9.40	126.0 12.35	142.6 13.97	153.1 15.00	142.9 14.00	122.4 12.00
		90	110	60	kgfcm N.m	34.4 3.38	40.3 3.95	48.5 4.75	55.9 5.48	73.5 7.20	83.2 8.15	96.8 9.48	126.0 12.35	122.4 12.00
			220	60	kgfcm N.m	34.4 3.38	40.3 3.95	48.5 4.75	55.9 5.48	73.5 7.20	83.2 8.15	96.8 9.48	126.0 12.35	122.4 12.00
			220/240	50	kgfcm N.m	32.8 3.21	38.4 3.76	46.2 4.53	53.3 5.22	70.0 6.86	79.2 7.76	92.2 9.03	120.0 11.76	122.4 12.00

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
9SDG□ -120F2WH	9WHD□-030	1200	110	60	kgfcm N.m	47.3 4.63	60.8 5.95	85.5 8.38	108.0 10.58	123.8 12.13	144.0 14.11	177.0 17.35	173.5 17.00	163.3 16.00	132.7 13.00
			220	60	kgfcm N.m	47.3 4.63	60.8 5.95	85.5 8.38	108.0 10.58	123.8 12.13	144.0 14.11	177.0 17.35	173.5 17.00	163.3 16.00	132.7 13.00
			220/240	50	kgfcm N.m	49.8 4.88	64.0 6.27	90.1 8.83	113.8 11.15	130.4 12.77	151.7 14.86	183.7 18.00	173.5 17.00	163.3 16.00	132.7 13.00
		90	110	60	kgfcm N.m	26.5 2.59	34.0 3.33	47.9 4.69	60.5 5.93	69.3 6.79	80.6 7.90	99.1 9.71	113.4 11.11	126.0 12.35	132.7 13.00
			220	60	kgfcm N.m	26.5 2.59	34.0 3.33	47.9 4.69	60.5 5.93	69.3 6.79	80.6 7.90	99.1 9.71	113.4 11.11	126.0 12.35	132.7 13.00
			220/240	50	kgfcm N.m	25.2 2.47	32.4 3.18	45.6 4.47	57.6 5.64	66.0 6.47	76.8 7.53	94.4 9.25	108.0 10.58	120.0 11.76	132.7 13.00

Motor Images

