

# 90W

Speed Control  
Reversible Motor  
90W(□90mm)

## Motor Specification

Model 9SRDG*-90F2□: Gear Type Shaft 9SRDD*-90F2: D-Cut Type Shaft 9SRDK*-90F2: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque		Permissible Torque				Capacitor μF / VAC
							kgfcm	N.m	1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
9SRDGA-90F2□	90	1∅110	60	4	30min.	90-1700	6.50	0.650	6.30	0.630	3.00	0.300	25.0 / 250
9SRDGD-90F2□	90	1∅220	60	4	30min.	90-1700	6.50	0.650	6.30	0.630	3.00	0.300	6.0 / 400
9SRDGE-90F2□	90	1∅220	50	4	30min.	90-1400	4.60	0.460	5.40	0.540	2.20	0.220	6.0 / 400
		1∅240					5.50	0.550	6.10	0.610	2.20	0.220	

- 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.

## 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
9SRDG□ -90F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	10.5 1.02	15.7 1.54	18.8 1.84	26.1 2.56	31.4 3.07	39.2 3.84	47.1 4.61	59.1 5.79	70.9 6.95	85.1 8.33	85.7 8.40
			220	60	kgfcm N.m	10.5 1.02	15.7 1.54	18.8 1.84	26.1 2.56	31.4 3.07	39.2 3.84	47.1 4.61	59.1 5.79	70.9 6.95	85.1 8.33	85.7 8.40
			220/ 240	50	kgfcm N.m	10.1 0.99	15.2 1.49	18.2 1.79	25.3 2.48	30.4 2.98	38.0 3.72	45.6 4.47	57.2 5.60	68.6 6.73	82.4 8.07	83.0 8.13
		90	110	60	kgfcm N.m	5.0 0.49	7.5 0.73	9.0 0.88	12.5 1.22	14.9 1.46	18.7 1.83	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00
			220	60	kgfcm N.m	5.0 0.49	7.5 0.73	9.0 0.88	12.5 1.22	14.9 1.46	18.7 1.83	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00
			220/ 240	50	kgfcm N.m	3.7 0.36	5.5 0.54	6.6 0.64	9.1 0.89	11.0 1.07	13.7 1.34	16.4 1.61	20.6 2.02	24.8 2.43	29.7 2.91	29.9 2.93

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200		
9SRDG□ -90F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	107.1 10.50	128.5 12.59	154.2 15.11	171.4 16.79	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	
			220	60	kgfcm N.m	107.1 10.50	128.5 12.59	154.2 15.11	171.4 16.79	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220/ 240	50	kgfcm N.m	103.7 10.16	124.4 12.20	149.3 14.63	165.9 16.26	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
		90	110	60	kgfcm N.m	51.0 5.00	61.2 6.00	73.4 7.20	81.6 8.00	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220	60	kgfcm N.m	51.0 5.00	61.2 6.00	73.4 7.20	81.6 8.00	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220/ 240	50	kgfcm N.m	37.4 3.67	44.9 4.40	53.9 5.28	59.8 5.86	74.8 7.33	89.8 8.80	100.7 9.86	120.8 11.84	134.2 13.15	161.0 15.78	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 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.

# B AC Motors

## S.C. Reversible Motor 90W (□90mm)

### Max. Permissible Torque at Output Shaft of Gearbox

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			
9SRDG□ -90F2H	9HBK □BH	1200	110	60	kgfcm N.m	15.7 1.54	18.8 1.84	31.4 3.07	47.1 4.61	59.1 5.79	70.9 6.95	85.1 8.33	85.7 8.40	107.1 10.50	128.5 12.59	154.2 15.11	214.2 20.99	257.0 25.19	288.2 28.25	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	15.7 1.54	18.8 1.84	31.4 3.07	47.1 4.61	59.1 5.79	70.9 6.95	85.1 8.33	85.7 8.40	107.1 10.50	128.5 12.59	154.2 15.11	214.2 20.99	257.0 25.19	288.2 28.25	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	220/240	50	kgfcm N.m	15.2 1.49	18.2 1.79	30.4 2.98	45.6 4.47	57.2 5.60	68.6 6.73	82.4 8.07	83.0 8.13	103.7 10.16	124.4 12.20	149.3 14.63	207.4 20.33	248.9 24.39	279.1 27.35	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
			110	60	kgfcm N.m	7.5 0.73	9.0 0.88	14.9 1.46	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00	51.0 5.00	61.2 6.00	73.4 7.20	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	219.6 21.52	274.5 26.90	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
		90	9HFK □BH	220	60	kgfcm N.m	7.5 0.73	9.0 0.88	14.9 1.46	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00	51.0 5.00	61.2 6.00	73.4 7.20	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	219.6 21.52	274.5 26.90	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
				220/240	50	kgfcm N.m	5.5 0.54	6.6 0.64	11.0 1.07	16.4 1.61	20.6 2.02	24.8 2.43	29.7 2.91	29.9 2.93	37.4 3.67	44.9 4.40	53.9 5.28	74.8 7.33	89.8 8.80	100.7 9.86	120.8 11.84	134.2 13.15	161.0 15.78	201.3 19.73	241.6 23.67	241.6 23.67	241.6 23.67	241.6 23.67

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SRDG□ -90F2W	9WD□BL/ □BR/□BRL	1200	110	60	kgfcm N.m	51.7 5.06	60.5 5.93	72.8 7.13	83.9 8.22	110.3 10.80	124.7 12.22	145.2 14.22	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	51.7 5.06	60.5 5.93	72.8 7.13	83.9 8.22	110.3 10.80	124.7 12.22	145.2 14.22	142.9 14.00	122.4 12.00
			220/240	50	kgfcm N.m	50.0 4.90	58.6 5.74	70.5 6.90	81.3 7.96	106.8 10.46	120.8 11.84	140.5 13.77	142.9 14.00	122.4 12.00
		90	110	60	kgfcm N.m	24.6 2.41	28.8 2.82	34.7 3.40	40.0 3.92	52.5 5.15	59.4 5.82	69.1 6.77	90.0 8.82	99.0 9.70
			220	60	kgfcm N.m	24.6 2.41	28.8 2.82	34.7 3.40	40.0 3.92	52.5 5.15	59.4 5.82	69.1 6.77	90.0 8.82	99.0 9.70
			220/240	50	kgfcm N.m	18.0 1.77	21.1 2.07	25.4 2.49	29.3 2.87	38.5 3.77	43.6 4.27	50.7 4.97	66.0 6.47	72.6 7.11

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
9SRDG□ -90F2WH	9WHD□ -030	1200	110	60	kgfcm N.m	39.7 3.89	51.0 5.00	71.8 7.04	90.7 8.89	104.0 10.19	121.0 11.85	148.7 14.57	170.1 16.67	163.3 16.00	132.7 13.00
			220	60	kgfcm N.m	39.7 3.89	51.0 5.00	71.8 7.04	90.7 8.89	104.0 10.19	121.0 11.85	148.7 14.57	170.1 16.67	163.3 16.00	132.7 13.00
			220/240	50	kgfcm N.m	38.4 3.77	49.4 4.84	69.5 6.81	87.8 8.61	100.7 9.86	117.1 11.48	144.0 14.11	164.7 16.14	163.3 16.00	132.7 13.00
		90	110	60	kgfcm N.m	18.9 1.85	24.3 2.38	34.2 3.35	43.2 4.23	49.5 4.85	57.6 5.64	70.8 6.94	81.0 7.94	90.0 8.82	105.6 10.35
			220	60	kgfcm N.m	18.9 1.85	24.3 2.38	34.2 3.35	43.2 4.23	49.5 4.85	57.6 5.64	70.8 6.94	81.0 7.94	90.0 8.82	105.6 10.35
			220/240	50	kgfcm N.m	13.9 1.36	17.8 1.75	25.1 2.46	31.7 3.10	36.3 3.56	42.2 4.14	51.9 5.09	59.4 5.82	66.0 6.47	77.4 7.59

### Motor Images





