

# 120W

Speed Control  
Reversible Motor  
120W(□90mm)

## Motor Specification

Model 9SRDG*-120F2□: Gear Type Shaft 9SRDD*-120F2: D-Cut Type Shaft 9SRDK*-120F2: 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-120F2□	120	1∅110	60	4	30min.	90-1700	7.80	0.780	7.50	0.750	4.20	0.420	30.0 / 250
9SRDGD-120F2□	120	1∅220	60	4	30min.	90-1700	7.80	0.780	7.50	0.750	4.20	0.420	6.5 / 400
9SRDGE-120F2□	120	1∅220	50	4	30min.	90-1400	5.60	0.560	7.20	0.720	4.00	0.400	6.5 / 400
		1∅240					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.

## 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□ -120F2P	9PBK□BH 9PFK□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
					N.m	1.22	1.83	2.20	3.05	3.66	4.58	5.49	6.89	8.27	9.92	10.00
			220	60	kgfcm	12.5	18.7	22.4	31.1	37.4	46.7	56.0	70.3	84.4	101.3	102.0
		N.m			1.22	1.83	2.20	3.05	3.66	4.58	5.49	6.89	8.27	9.92	10.00	
		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	
				N.m	1.17	1.76	2.11	2.93	3.51	4.39	5.27	6.62	7.94	9.53	9.60	
	90	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	
				N.m	0.68	1.02	1.23	1.71	2.05	2.56	3.07	3.86	4.63	5.56	5.60	
		220	60	kgfcm	7.0	10.5	12.5	17.4	20.9	26.1	31.4	39.4	47.3	56.7	57.1	
				N.m	0.68	1.02	1.23	1.71	2.05	2.56	3.07	3.86	4.63	5.56	5.60	
		220/240	50	kgfcm	6.6	10.0	12.0	16.6	19.9	24.9	29.9	37.5	45.0	54.0	54.4	
				N.m	0.65	0.98	1.17	1.63	1.95	2.44	2.93	3.68	4.41	5.29	5.33	

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180
9SRDG□ -120F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm	127.5	153.0	183.6	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
					N.m	12.50	14.99	17.99	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
			220	60	kgfcm	127.5	153.0	183.6	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m			12.50	14.99	17.99	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
		220/240	50	kgfcm	122.4	146.9	176.3	195.8	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
				N.m	12.00	14.39	17.27	19.19	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
	90	110	60	kgfcm	71.4	85.7	102.8	114.2	142.8	171.4	192.2	200.0	200.0	200.0	200.0		
				N.m	7.00	8.40	10.08	11.20	13.99	16.79	18.83	19.60	19.60	19.60	19.60		
		220	60	kgfcm	71.4	85.7	102.8	114.2	142.8	171.4	192.2	200.0	200.0	200.0	200.0		
				N.m	7.00	8.40	10.08	11.20	13.99	16.79	18.83	19.60	19.60	19.60	19.60		
		220/240	50	kgfcm	68.0	81.6	97.9	108.8	136.0	163.2	183.0	200.0	200.0	200.0	200.0		
				N.m	6.66	8.00	9.60	10.66	13.33	15.99	17.93	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.

# B AC Motors

S.C. Reversible Motor 120W (□90mm)

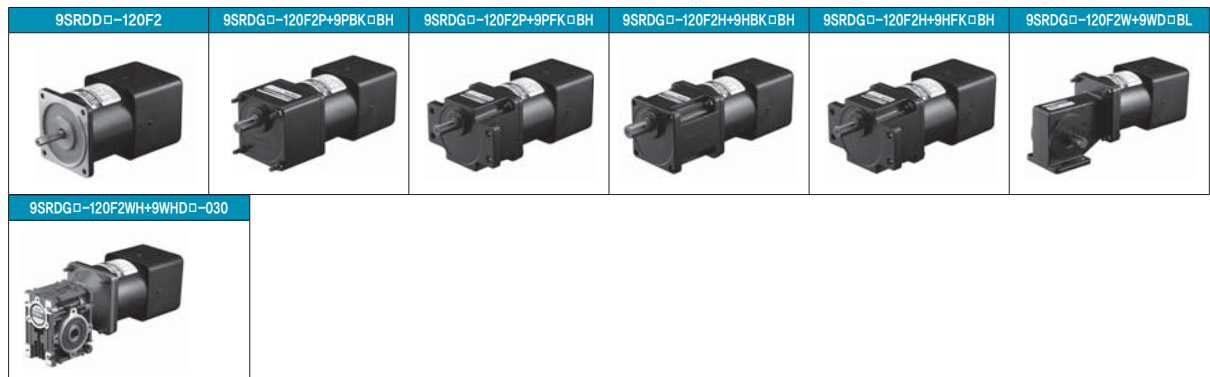
## Max. Permissible Torque at Output Shaft of Gearbox

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□ -120F2H	9HBK □BH	1200	110	60	kgfcm	18.7	22.4	37.4	56.0	70.3	84.4	101.3	102.0	127.5	153.0	183.6	255.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	
					N.m	1.83	2.20	3.66	5.49	6.89	8.27	9.92	10.00	12.50	14.99	17.99	24.99	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
			220	60	kgfcm	18.7	22.4	37.4	56.0	70.3	84.4	101.3	102.0	127.5	153.0	183.6	255.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	1.83	2.20	3.66	5.49	6.89	8.27	9.92	10.00	12.50	14.99	17.99	24.99	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
		220/240	50	kgfcm	17.9	21.5	35.9	53.8	67.5	81.0	97.2	97.9	122.4	146.9	176.3	244.8	293.8	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	1.76	2.11	3.51	5.27	6.62	7.94	9.53	9.60	12.00	14.39	17.27	23.99	28.79	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	9HFK □BH	1200	110	60	kgfcm	10.5	12.5	20.9	31.4	39.4	47.3	56.7	57.1	71.4	85.7	102.8	142.8	171.4	192.2	230.6	256.2	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	1.02	1.23	2.05	3.07	3.86	4.63	5.56	5.60	7.00	8.40	10.08	13.99	16.79	18.83	22.60	25.11	29.40	29.40	29.40	29.40	29.40	29.40
			220	60	kgfcm	10.5	12.5	20.9	31.4	39.4	47.3	56.7	57.1	71.4	85.7	102.8	142.8	171.4	192.2	230.6	256.2	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	1.02	1.23	2.05	3.07	3.86	4.63	5.56	5.60	7.00	8.40	10.08	13.99	16.79	18.83	22.60	25.11	29.40	29.40	29.40	29.40	29.40	29.40	29.40		
		220/240	50	kgfcm	10.0	12.0	19.9	29.9	37.5	45.0	54.0	54.4	68.0	81.6	97.9	136.0	163.2	183.0	219.6	244.0	292.8	300.0	300.0	300.0	300.0	300.0	
		N.m	0.98	1.17	1.95	2.93	3.68	4.41	5.29	5.33	6.66	8.00	9.60	13.33	15.99	17.93	21.52	23.91	28.69	29.40	29.40	29.40	29.40	29.40	29.40		

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

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

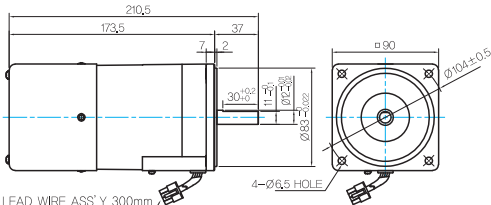
## Motor Images



## Dimensions

### MOTOR ONLY

- MOTOR MODEL:  
9SRDD□-120F2 (POWERFUL FAN)

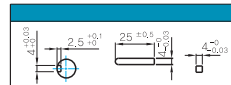


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,22  
T,G UL STYLE NO,1430 AWG NO,24

### MOTOR OUTPUT SHAFT

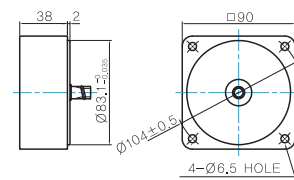
MODEL	SPEC
D-CUT TYPE	37 30±0,2 11±0,2
KEY TYPE	37 25±0,2 11±0,2

### KEY SPEC



### INTER-DECIMAL GEARBOX

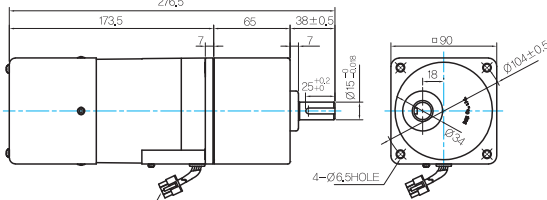
- MODEL: 9XD10□□



### GEARED MOTOR

#### P TYPE GEARBOX

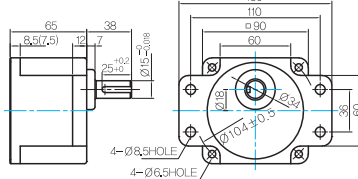
- MOTOR MODEL:  
9SRDG□-120F2P (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,22  
T,G UL STYLE NO,1430 AWG NO,24

- GEARBOX MODEL:  
9PBK□BH

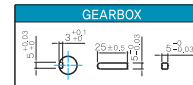
- GEARBOX MODEL:  
9PFK□BH



#### GEARBOX OUTPUT SHAFT

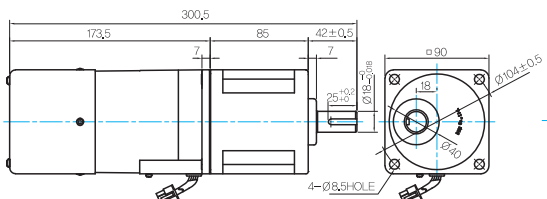
MODEL	SPEC
KEY TYPE	38 25±0,2 11±0,2
9PBK□BH 9PFK□BH	

#### KEY SPEC



#### H TYPE GEARBOX

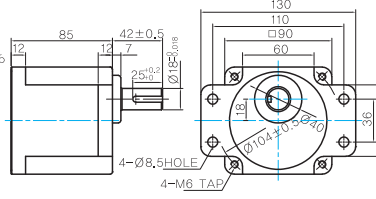
- MOTOR MODEL:  
9SRDG□-120F2H (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,22  
T,G UL STYLE NO,1430 AWG NO,24

- GEARBOX MODEL:  
9HBK□BH

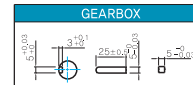
- GEARBOX MODEL:  
9HFK□BH



#### GEARBOX OUTPUT SHAFT

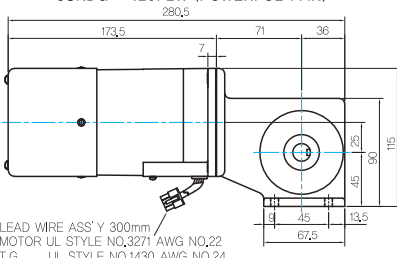
MODEL	SPEC
KEY TYPE	42 25±0,2 11±0,2
9HBK□BH 9HFK□BH	

#### KEY SPEC



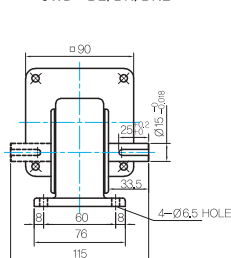
#### W TYPE GEARBOX

- MOTOR MODEL:  
9SRDG□-120F2W (POWERFUL FAN)

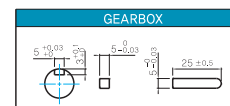


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,22  
T,G UL STYLE NO,1430 AWG NO,24

- GEARBOX MODEL:  
9WD□BL/BR/BRL



#### KEY SPEC



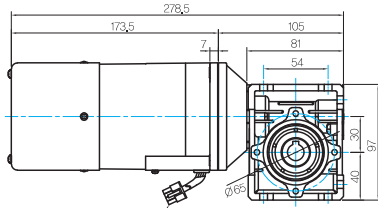
# B AC Motors

## S.C. Reversible Motor 120W (□90mm)

### Dimensions

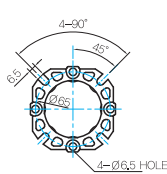
#### WH TYPE GEARBOX

● MOTOR MODEL:  
9SRDG□-120F2WH (POWERFUL FAN)

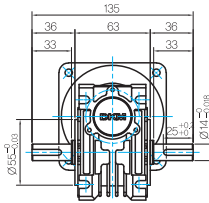


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,22  
T,G UL STYLE NO,1430 AWG NO,24

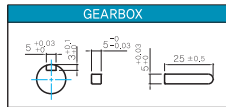
#### FLANGE



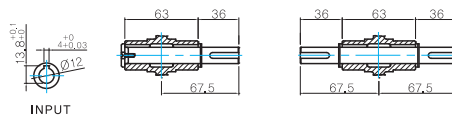
● GEARHEAD MODEL:  
9WHD□-030



#### KEY SPEC



● SHAFT (Unidirectional, Bi-directional)

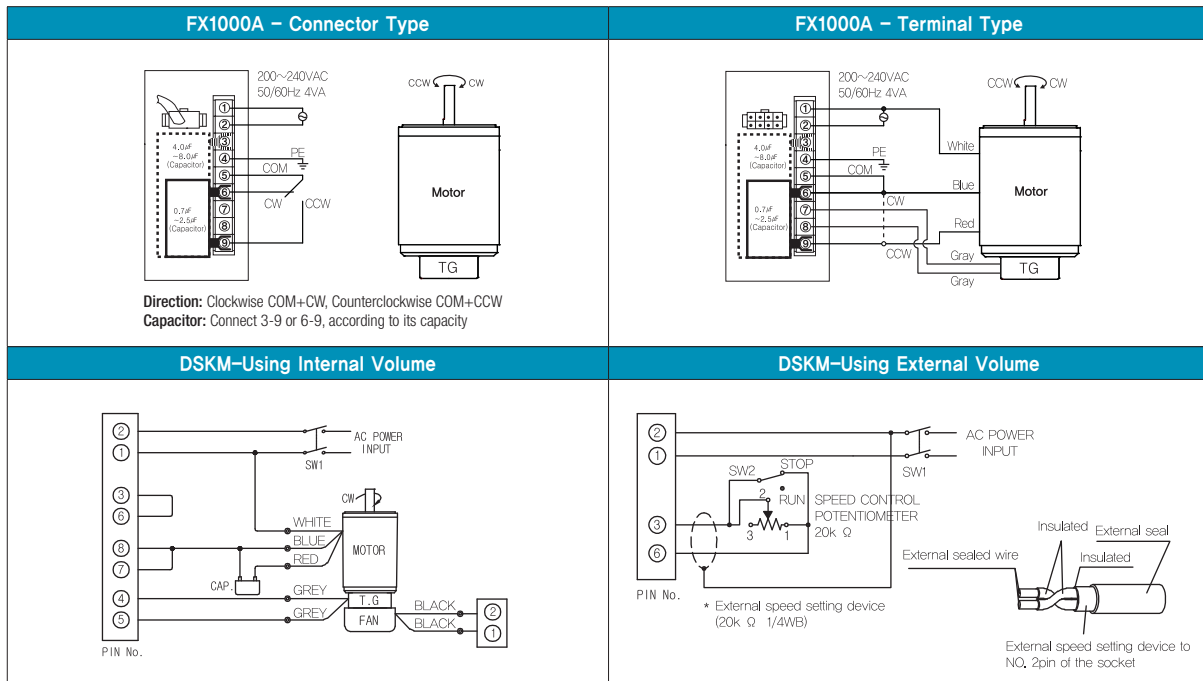


#### WEIGHT

PART	WEIGHT(kg)
MOTOR	3,1
9PB(F)K2BH ~ 9PB(F)K18BH	1,3
9PB(F)K20BH ~ 9PB(F)K200BH	1,4
9HB(F)K3BH ~ 9HB(F)K9BH	1,45
9HB(F)K12,5BH ~ 9HB(F)K18BH	1,5
9HB(F)K20BH ~ 9HB(F)K60BH	1,7
9HB(F)K75BH ~ 9HB(F)K200BH	1,8
9WD□BL/BR/BRL	1,0
9WHD□-030	1,13
9XD10□□	0,5

\* The output flange and shafts are sold separately.

### Connection Diagrams



1) At first connect the speed controller with the motor as instructed in connection diagrams. And then input the external power to both of the terminal 'AC' for the rated speed operation.

Now you can adjust the main volume to control the output speed of motor.

2) The direction of motor rotation is as viewed from the shaft end of the motor.

3) CW represents the clockwise direction, while CCW represents the counterclockwise direction.

4) When using powerful fan (F2 type) attached motor, connect two black wires of the fan to No.1 and No.2 terminals in order to supply power.