

# B AC Motors

## S.C. Brake Motor 15W (□80mm)

# 15W

Speed Control  
Brake Motor  
15W(□80mm)

### Motor Specification

Model 8SBDG* <sup>-</sup> 15□: Gear Type Shaft 8SBDD* <sup>-</sup> 15: D-Cut 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	kgfcm	N.m	
8SBDGA-15□	15	1∅110	60	4	30min.	90-1700	0.70	0.070	1.50	0.150	0.60	0.060	6.0 / 450
8SBDGD-15□	15	1∅220	60	4	30min.	90-1700	0.85	0.085	1.50	0.150	0.55	0.055	1.5 / 450
8SBDGE-15□	15	1∅220	50	4	30min.	90-1400	0.75	0.075	1.20	0.120	0.50	0.050	1.5 / 450
		0.85					0.085	1.40	0.140	0.50	0.050		

- 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 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	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	360		
8SBDG □-15G	8GBK □BMH	1200	110	60	kgfcm	3.7	4.5	6.2	7.5	9.3	11.2	15.6	18.7	22.4	28.1	33.8	36.7	40.8	51.0	61.2	76.5	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	
					N.m	0.37	0.44	0.61	0.73	0.92	1.10	1.53	1.83	2.20	2.76	3.31	3.60	4.00	5.00	6.00	7.50	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
			kgfcm	3.7	4.5	6.2	7.5	9.3	11.2	15.6	18.7	22.4	28.1	33.8	36.7	40.8	51.0	61.2	76.5	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	0.37	0.44	0.61	0.73	0.92	1.10	1.53	1.83	2.20	2.76	3.31	3.60	4.00	5.00	6.00	7.50	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
		kgfcm	3.5	4.2	5.8	7.0	8.7	10.5	14.5	17.4	20.9	26.3	31.5	34.3	38.1	47.6	57.1	71.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	0.34	0.41	0.57	0.68	0.85	1.02	1.42	1.71	2.05	2.57	3.09	3.36	3.73	4.66	5.60	7.00	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
	90	110	60	kgfcm	0.9	1.0	1.5	1.7	2.2	2.6	3.6	4.4	5.2	6.6	7.9	8.6	9.5	11.9	14.3	17.9	21.4	23.8	28.6	35.7	42.8	42.7	53.4	64.1	76.9			
				N.m	0.09	0.10	0.14	0.17	0.21	0.26	0.36	0.43	0.51	0.64	0.77	0.84	0.93	1.17	1.40	1.75	2.10	2.33	2.80	3.50	4.20	4.18	5.23	6.28	7.53			
		kgfcm	0.9	1.0	1.5	1.7	2.2	2.6	3.6	4.4	5.2	6.6	7.9	8.6	9.5	11.9	14.3	17.9	21.4	23.8	28.6	35.7	42.8	42.7	53.4	64.1	76.9					
		N.m	0.09	0.10	0.14	0.17	0.21	0.26	0.36	0.43	0.51	0.64	0.77	0.84	0.93	1.17	1.40	1.75	2.10	2.33	2.80	3.50	4.20	4.18	5.23	6.28	7.53					
		kgfcm	0.9	1.0	1.5	1.7	2.2	2.6	3.6	4.4	5.2	6.6	7.9	8.6	9.5	11.9	14.3	17.9	21.4	23.8	28.6	35.7	42.8	42.7	53.4	64.1	76.9					
		N.m	0.09	0.10	0.14	0.17	0.21	0.26	0.36	0.43	0.51	0.64	0.77	0.84	0.93	1.17	1.40	1.75	2.10	2.33	2.80	3.50	4.20	4.18	5.23	6.28	7.53					

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
8SBDG□ -15W	8WD□BL/ □BR/□BRL	1200	110	60	kgfcm	12.3	14.4	17.3	20.0	26.3	29.7	34.6	45.0	49.5
					N.m	1.21	1.41	1.70	1.96	2.57	2.91	3.39	4.41	4.85
			kgfcm	12.5	14.9	18.7	22.4	31.1	37.4	44.8	62.3	74.7		
		N.m	1.22	1.46	1.83	2.20	3.05	3.66	4.39	6.10	7.32			
		kgfcm	11.5	13.4	16.2	18.6	24.5	27.7	32.3	42.0	46.2			
		N.m	1.13	1.32	1.58	1.83	2.40	2.72	3.16	4.12	4.53			
	90	110	60	kgfcm	2.9	3.4	4.0	4.7	6.1	6.9	8.1	10.5	11.6	
				N.m	0.28	0.33	0.40	0.46	0.60	0.68	0.79	1.03	1.13	
		kgfcm	2.9	3.4	4.0	4.7	6.1	6.9	8.1	10.5	11.6			
		N.m	0.28	0.33	0.40	0.46	0.60	0.68	0.79	1.03	1.13			
		kgfcm	2.9	3.4	4.0	4.7	6.1	6.9	8.1	10.5	11.6			
		N.m	0.28	0.33	0.40	0.46	0.60	0.68	0.79	1.03	1.13			

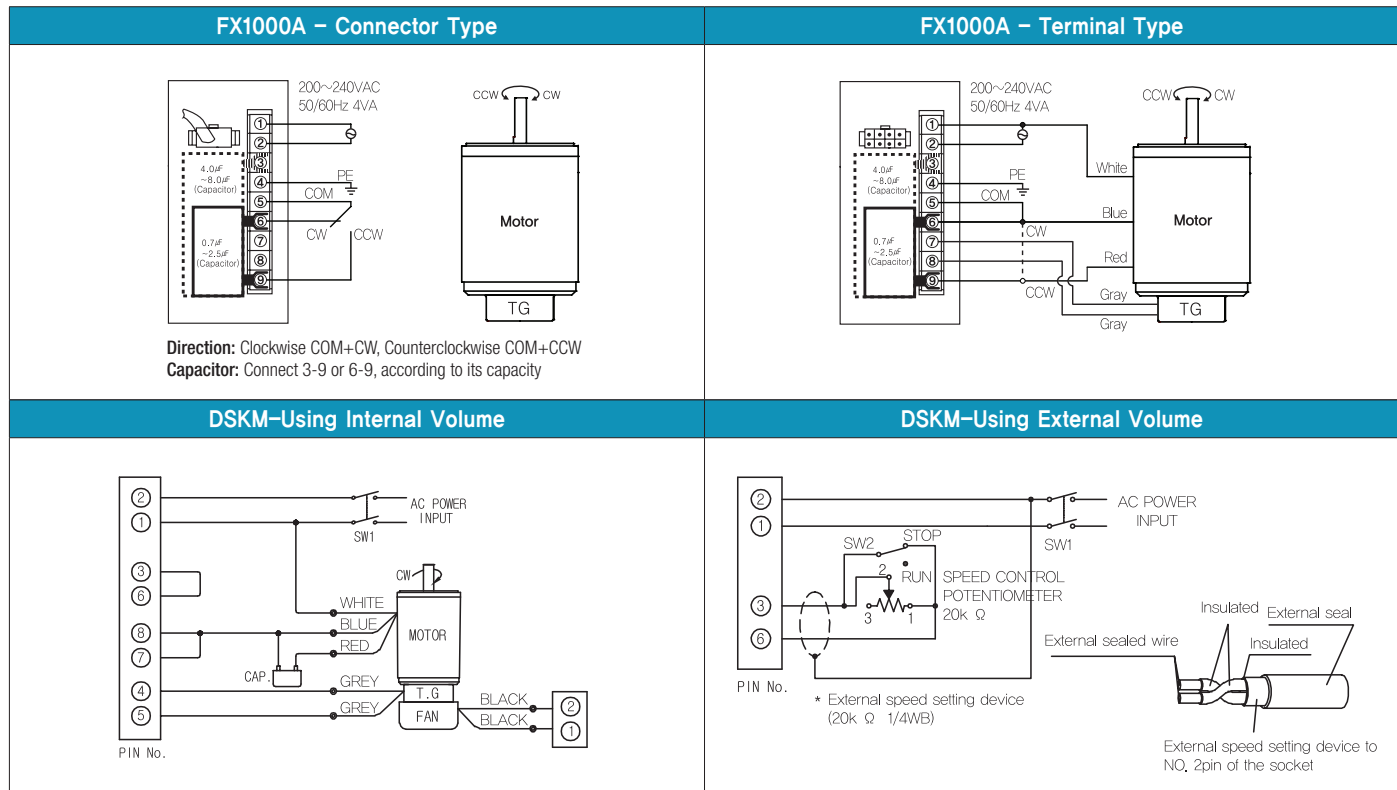
- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the Gearbox model name.
- 3) A colored background indicates gear shaft rotation in the same direction as the motor shaft; a white background indicates rotation in the opposite 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. Brake Motor 15W (□80mm)

## 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.

## S.C. Brake Motor 25W (□ 80mm)

# 25W

Speed Control  
Brake Motor  
25W(□ 80mm)

### Motor Specification

Model 8SBDG*-25□: Gear Type Shaft 8SBD*-25: D-Cut 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	
8SBDGA-25□	25	1∅110	60	4	30min.	90-1700	1.40	0.140	1.55	0.155	0.70	0.070	10.0 / 250
8SBDGD-25□	25	1∅220	60	4	30min.	90-1700	1.60	0.160	1.80	0.180	0.90	0.090	2.5 / 450
8SBDGE-25□	25	1∅220	50	4	30min.	90-1400	1.00	0.100	1.50	0.150	0.50	0.050	2.0 / 450
		1∅240					1.20	0.120	1.80	0.180	0.50	0.050	

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 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	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36
8SBDG□ -25G	8GBK□BMH	1200	110	60	kgfcm N.m	3.9 0.38	4.6 0.45	6.4 0.63	7.7 0.76	9.6 0.95	11.6 1.13	16.1 1.58	19.3 1.89	23.2 2.27	29.1 2.85	34.9 3.42	37.9 3.72
			220	60	kgfcm N.m	5.8 0.57	6.9 0.68	9.6 0.94	11.5 1.13	14.4 1.41	17.3 1.70	24.0 2.35	28.8 2.83	34.6 3.39	39.2 3.84	47.1 4.61	46.4 4.55
			220/ 240	50	kgfcm N.m	4.5 0.44	5.4 0.53	7.5 0.73	9.0 0.88	11.2 1.10	13.4 1.32	18.7 1.83	22.4 2.20	26.9 2.64	33.8 3.31	40.5 3.97	44.1 4.32
		90	110	60	kgfcm N.m	1.7 0.17	2.1 0.20	2.9 0.28	3.5 0.34	4.4 0.43	5.2 0.51	7.3 0.71	8.7 0.85	10.5 1.02	13.1 1.29	15.8 1.54	17.1 1.68
			220	60	kgfcm N.m	2.2 0.22	2.7 0.26	3.7 0.37	4.5 0.44	5.6 0.55	6.7 0.66	9.3 0.92	11.2 1.10	13.4 1.32	16.9 1.65	20.3 1.98	22.0 2.16
			220/ 240	50	kgfcm N.m	1.2 0.12	1.5 0.15	2.1 0.20	2.5 0.24	3.1 0.31	3.7 0.37	5.2 0.51	6.2 0.61	7.5 0.73	9.4 0.92	11.3 1.10	12.2 1.20

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	40	50	60	75	90	100	120	150	180	200	250	300	360	
8SBDG□ -25G	8GBK□ BMH	1200	110	60	kgfcm N.m	42.2 4.13	52.7 5.16	63.2 6.20	79.1 7.75	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	
			220	60	kgfcm N.m	51.6 5.06	64.5 6.32	77.4 7.59	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84
			220/ 240	50	kgfcm N.m	49.0 4.80	61.2 6.00	73.4 7.20	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84
		90	110	60	kgfcm N.m	19.0 1.87	23.8 2.33	28.6 2.80	35.7 3.50	42.8 4.20	47.6 4.66	57.1 5.60	71.4 7.00	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84
			220	60	kgfcm N.m	24.5 2.40	30.6 3.00	36.7 3.60	45.9 4.50	55.1 5.40	61.2 6.00	73.4 7.20	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84
			220/ 240	50	kgfcm N.m	13.6 1.33	17.0 1.67	20.4 2.00	25.5 2.50	30.6 3.00	34.0 3.33	40.8 4.00	51.0 5.00	61.2 6.00	61.0 5.98	76.3 7.47	80.0 7.84	80.0 7.84	

# B AC Motors

## S.C. Brake Motor 25W (□80mm)

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

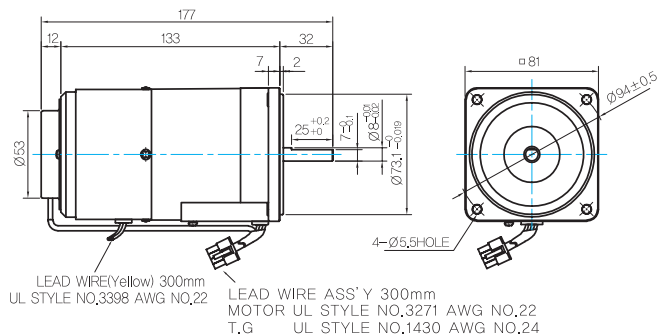
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
8SBDG□ -25W	8WD□BL/ □BR/□BRL	1200	110	60	kgfcm N.m	12.7 1.25	14.9 1.46	17.9 1.75	20.6 2.02	27.1 2.66	30.7 3.01	35.7 3.50	46.5 4.56	51.2 5.01
			220	60	kgfcm N.m	14.9 1.46	17.9 1.76	22.4 2.20	26.9 2.64	37.4 3.66	44.8 4.39	53.8 5.27	74.7 7.32	81.6 8.00
			220/240	50	kgfcm N.m	14.8 1.45	17.3 1.69	20.8 2.04	24.0 2.35	31.5 3.09	35.6 3.49	41.5 4.06	54.0 5.29	59.4 5.82
		90	110	60	kgfcm N.m	5.7 0.56	6.7 0.66	8.1 0.79	9.3 0.91	12.3 1.20	13.9 1.36	16.1 1.58	21.0 2.06	23.1 2.26
			220	60	kgfcm N.m	7.4 0.72	8.6 0.85	10.4 1.02	12.0 1.17	15.8 1.54	17.8 1.75	20.7 2.03	27.0 2.65	29.7 2.91
			220/240	50	kgfcm N.m	4.1 0.40	4.8 0.47	5.8 0.57	6.7 0.65	8.8 0.86	9.9 0.97	11.5 1.13	15.0 1.47	16.5 1.62

- 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.

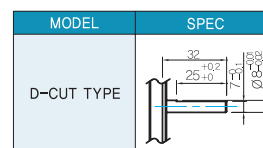
### Dimensions

#### MOTOR ONLY

- MOTOR MODEL: 8SBDD□-25 (NO FAN)

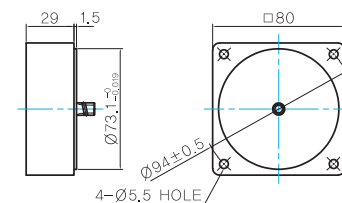


#### MOTOR OUTPUT SHAFT



#### INTER-DECIMAL GEARBOX

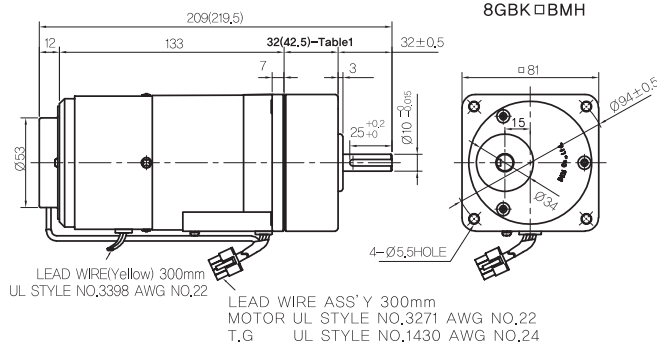
- MODEL: 8XD10□□



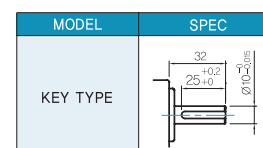
### GEARED MOTOR

#### G TYPE GEARBOX

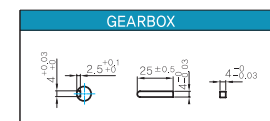
- MOTOR MODEL: 8SBDG□-25G (NO FAN)
- GEARBOX MODEL: 8GBK□BMH



#### GEARBOX OUTPUT SHAFT



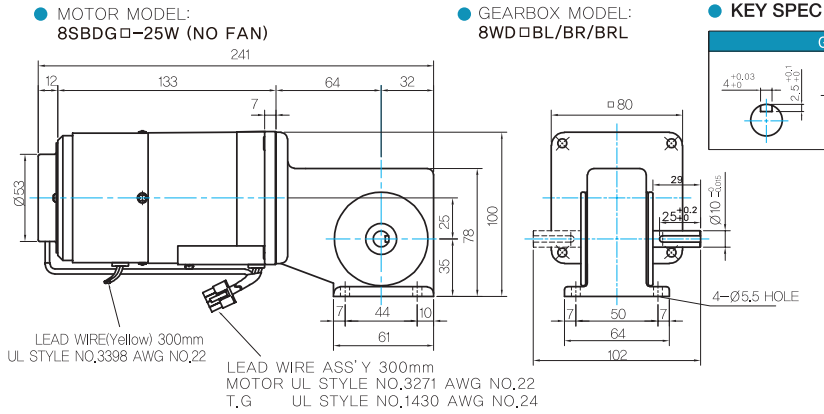
#### KEY SPEC



#### 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK25BMH - 8GBK360BMH

### W TYPE GEARBOX



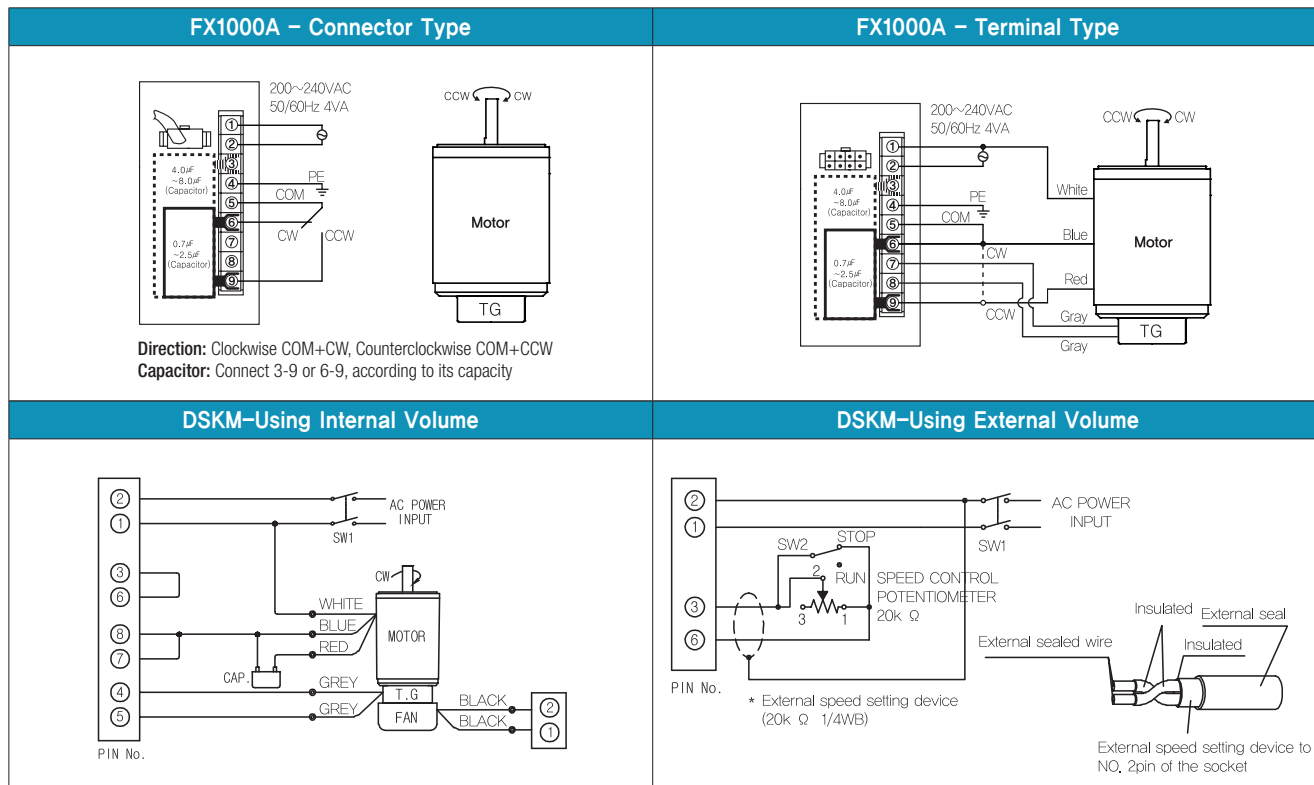
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	2.09
8GBK3BMH ~ 8GBK18BMH	0.48
8GBK25BMH ~ 8GBK30BMH	0.61
8GBK36BMH ~ 8GBK180BMH	0.67
8GBK200BMH ~ 8GBK360BMH	0.63
8WD□BL/BR/BRL	0.67
8XD10□□	0.44

### Motor Images



### Connection Diagrams



- 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.
- The direction of motor rotation is as viewed from the shaft end of the motor.
- CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 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.

# B AC Motors

## S.C. Brake Motor 40W (□90mm)

# 40W

Speed Control  
Brake Motor  
40W(□90mm)

### Motor Specification

Model 9SBDG*~40□: Gear Type Shaft 9SBDD*~40: D-Cut Type Shaft 9SBDK*~40: 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	
9SBDGA~40□	40	1φ110	60	4	30min.	90~1700	2.00	0.200	2.90	0.290	1.20	0.120	16.0 / 250
9SBDGD~40□	40	1φ220	60	4	30min.	90~1700	2.00	0.200	2.90	0.290	1.20	0.120	4.0 / 400
9SBDGE~40□	40	1φ220	50	4	30min.	90~1400	1.70	0.170	2.50	0.250	0.70	0.070	3.0 / 450
		2.10					0.210	3.00	0.300	0.70	0.070		

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	10	12.5	15	18	25	30	36	40	50	60	75	90	100	120	150	180	200				
9SBDG □~40G	9GBK □BMH	1200	110	60	kgfcm	4.8	7.2	8.7	12.0	14.4	18.1	21.7	24.1	30.1	36.1	39.2	54.4	65.3	71.0	78.9	98.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
					N.m	0.47	0.71	0.85	1.18	1.42	1.77	2.12	2.36	2.95	3.54	3.84	5.33	6.39	6.96	7.73	9.66	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80
					kgfcm	4.8	7.2	8.7	12.0	14.4	18.1	21.7	24.1	30.1	36.1	39.2	54.4	65.3	71.0	78.9	98.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.47	0.71	0.85	1.18	1.42	1.77	2.12	2.36	2.95	3.54	3.84	5.33	6.39	6.96	7.73	9.66	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80		
		kgfcm	5.0	7.5	9.0	12.5	14.9	18.7	22.4	24.9	31.1	37.4	40.5	56.3	67.5	73.4	81.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
		N.m	0.49	0.73	0.88	1.22	1.46	1.83	2.20	2.44	3.05	3.66	3.97	5.51	6.62	7.20	8.00	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80		
	90	110	60	kgfcm	2.0	3.0	3.6	5.0	6.0	7.5	9.0	10.0	12.5	14.9	16.2	22.5	27.0	29.4	32.6	40.8	49.0	61.2	73.4	81.6	97.9	100.0	100.0	100.0	100.0	100.0	100.0		
				N.m	0.20	0.29	0.35	0.49	0.59	0.73	0.88	0.98	1.22	1.46	1.59	2.21	2.65	2.88	3.20	4.00	4.80	6.00	7.20	8.00	9.60	9.80	9.80	9.80	9.80	9.80	9.80		
				kgfcm	2.0	3.0	3.6	5.0	6.0	7.5	9.0	10.0	12.5	14.9	16.2	22.5	27.0	29.4	32.6	40.8	49.0	61.2	73.4	81.6	97.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
		N.m	0.20	0.29	0.35	0.49	0.59	0.73	0.88	0.98	1.22	1.46	1.59	2.21	2.65	2.88	3.20	4.00	4.80	6.00	7.20	8.00	9.60	9.80	9.80	9.80	9.80	9.80	9.80	9.80			
		kgfcm	1.2	1.7	2.1	2.9	3.5	4.4	5.2	5.8	7.3	8.7	9.5	13.1	15.8	17.1	19.0	23.8	28.6	35.7	42.8	47.6	57.1	71.4	85.7	85.7	85.7	85.7	85.7	85.7			
		N.m	0.11	0.17	0.20	0.28	0.34	0.43	0.51	0.57	0.71	0.85	0.93	1.29	1.54	1.68	1.87	2.33	2.80	3.50	4.20	4.66	5.60	7.00	8.40	8.40	8.40	8.40	8.40	8.40			

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SBDG□ ~40W	9WD□BL/ □BR/□BRL	1200	110	60	kgfcm	23.8	27.8	33.5	38.6	50.8	57.4	66.8	87.0	95.7
					N.m	2.33	2.73	3.28	3.79	4.97	5.63	6.55	8.53	9.38
					kgfcm	24.1	28.9	36.1	43.3	60.2	72.2	86.7	120.4	122.4
		N.m	2.36	2.83	3.54	4.25	5.90	7.08	8.49	11.79	12.00			
		kgfcm	24.6	28.8	34.7	40.0	52.5	59.4	69.1	90.0	99.0			
		N.m	2.41	2.82	3.40	3.92	5.15	5.82	6.77	8.82	9.70			
	90	110	60	kgfcm	9.8	11.5	13.9	16.0	21.0	23.8	27.6	36.0	39.6	
				N.m	0.96	1.13	1.36	1.57	2.06	2.33	2.71	3.53	3.88	
				kgfcm	9.8	11.5	13.9	16.0	21.0	23.8	27.6	36.0	39.6	
		N.m	0.96	1.13	1.36	1.57	2.06	2.33	2.71	3.53	3.88			
		kgfcm	5.7	6.7	8.1	9.3	12.3	13.9	16.1	21.0	23.1			
		N.m	0.56	0.66	0.79	0.91	1.20	1.36	1.58	2.06	2.26			

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.

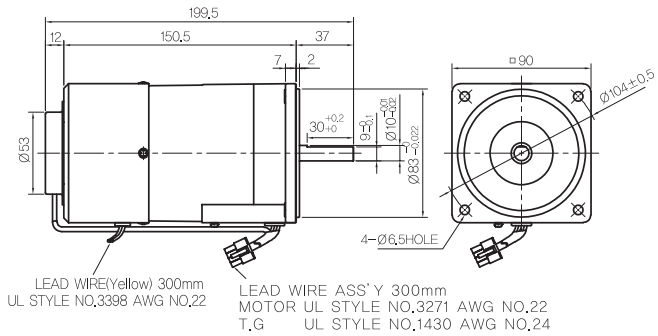
4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio.

The actual speed is 2~20% less than the displayed value, depending on the size of the load.

## Dimensions

### MOTOR ONLY

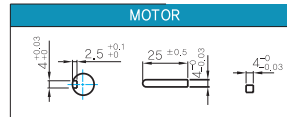
- MOTOR MODEL: 9SBDD□-40 (NO FAN)



### MOTOR OUTPUT SHAFT

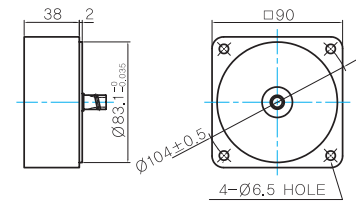
MODEL	SPEC
D-CUT TYPE	
9SBDD□-40	
KEY TYPE	
9SBDD□-40	

### KEY SPEC



### INTER-DECIMAL GEARBOX

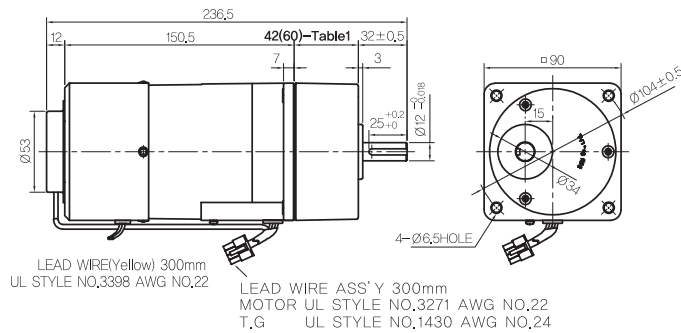
- MODEL: 9XD10□□



### GEARED MOTOR

#### G TYPE GEARBOX

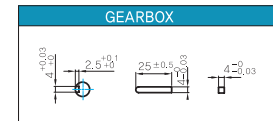
- MOTOR MODEL: 9SBDG□-40G (NO FAN)
- GEARBOX MODEL: 9GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

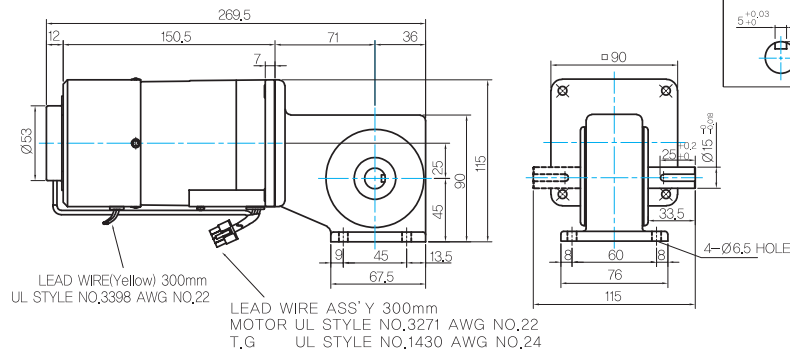


### 42(60)-Table1

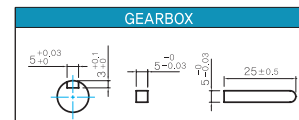
SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK18BMH
60	9GBK25BMH - 9GBK200BMH

#### W TYPE GEARBOX

- MOTOR MODEL: 9SBDG□-40W (NO FAN)
- GEARBOX MODEL: 9WD□BL/BR/BRL



### KEY SPEC



### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3,09	
GEAR BOX	9GBK2BMH ~ 9GBK15BMH	0,67
	9GBK18BMH ~ 9GBK30BMH	0,96
	9GBK36BMH ~ 9GBK200BMH	1,07
	9WD□BL/BR/BRL	1,0
	9XD10□□	0,5

## Motor Images

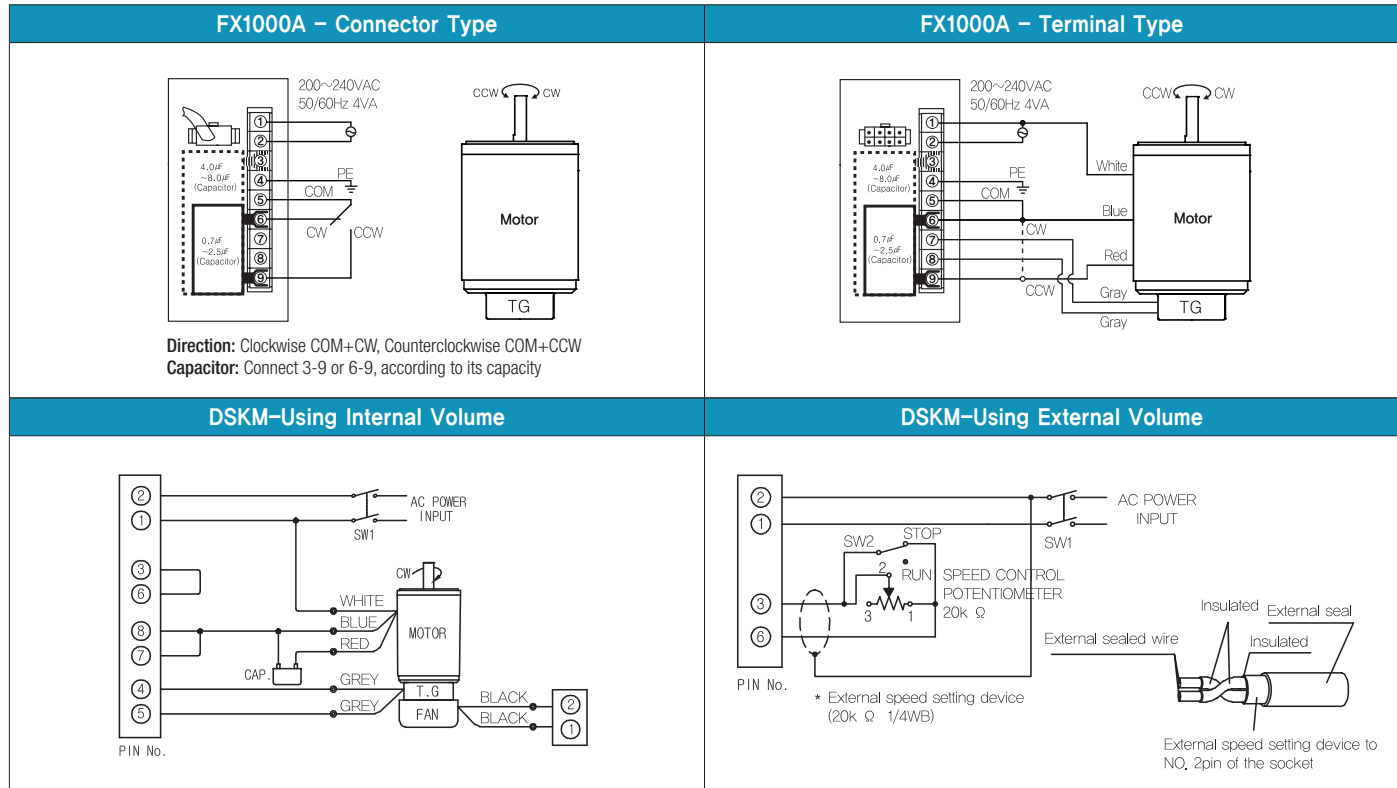




# B AC Motors

S.C. Brake Motor 40W (□90mm)

## 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.

# 60W

Speed Control  
Brake Motor  
60W(□90mm)

## Motor Specification

Model 9SBDG*~60F2□: Gear Type Shaft 9SBD*~60F2: D-Cut Type Shaft 9SBDK*~60F2: 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	
9SBDGA-60F2□	60	1∅110	60	4	30min.	90-1700	3.20	0.320	6.10	0.610	2.80	0.280	20.0 / 250
9SBDGD-60F2□	60	1∅220	60	4	30min.	90-1700	3.80	0.380	6.50	0.650	3.00	0.300	5.0 / 400
9SBDGE-60F2□	60	1∅220	50	4	30min.	90-1400	5.20	0.520	5.20	0.520	1.00	0.100	5.0 / 400
		1∅240					5.80	0.580	5.80	0.580	1.00	0.100	

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
9SBDG□ -60F2P	9PBK□BH 9PFK□BH	1200	110	60	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
			220	60	kgfcm N.m	10.8 1.06	16.2 1.59	19.4 1.90	27.0 2.64	32.4 3.17	40.5 3.97	48.6 4.76	60.9 5.97	73.1 7.17	87.8 8.60	88.4 8.66
			220/ 240	50	kgfcm N.m	9.6 0.94	14.4 1.42	17.3 1.70	24.1 2.36	28.9 2.83	36.1 3.54	43.3 4.25	54.4 5.33	65.3 6.39	78.3 7.67	78.9 7.73
		90	110	60	kgfcm N.m	4.6 0.46	7.0 0.68	8.4 0.82	11.6 1.14	13.9 1.37	17.4 1.71	20.9 2.05	26.3 2.57	31.5 3.09	37.8 3.70	38.1 3.73
			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	1.7 0.16	2.5 0.24	3.0 0.29	4.2 0.41	5.0 0.49	6.2 0.61	7.5 0.73	9.4 0.92	11.3 1.10	13.5 1.32	13.6 1.33

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200
9SBDG□ -60F2P	9PBK□BH 9PFK□BH	1200	110	60	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
			220	60	kgfcm N.m	110.5 10.83	132.6 12.99	159.1 15.59	176.8 17.33	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	98.6 9.66	118.3 11.60	142.0 13.91	157.8 15.46	197.2 19.33	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	47.6 4.66	57.1 5.60	68.5 6.72	76.2 7.46	95.2 9.33	114.2 11.20	128.1 12.55	153.7 15.06	170.8 16.74	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
			220/ 240	50	kgfcm N.m	17.0 1.67	20.4 2.00	24.5 2.40	27.2 2.67	34.0 3.33	40.8 4.00	45.8 4.48	54.9 5.38	61.0 5.98	73.2 7.17	91.5 8.97	109.8 10.76	109.8 10.76





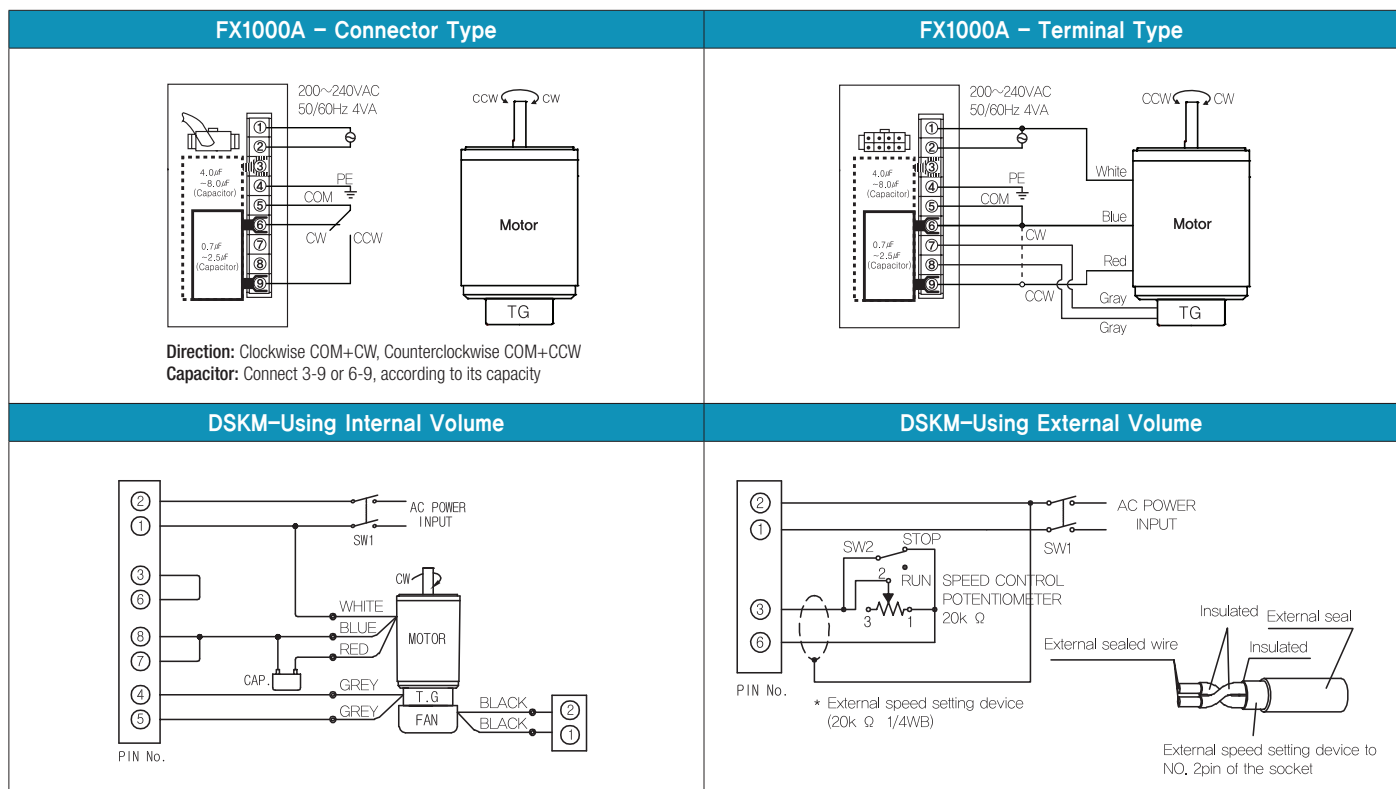
# B AC Motors

## S.C. Brake Motor 60W (□90mm)

### Motor Images



### 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.
- The direction of motor rotation is as viewed from the shaft end of the motor.
- CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 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.

## S.C. Brake Motor 90W (□90mm)

# 90W

Speed Control  
Brake Motor  
90W(□90mm)

### Motor Specification

Model 9SBDG*-90F2□: Gear Type Shaft 9SBD*-90F2: D-Cut Type Shaft 9SBDK*-90F2: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque kgfcm N.m		Permissible Torque				Capacitor μF / VAC
									1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
9SBDGA-90F2□	90	1∅110	60	4	30min.	90-1700	6.50	0.650	6.30	0.630	3.00	0.300	25.0 / 250
9SBDGD-90F2□	90	1∅220	60	4	30min.	90-1700	6.50	0.650	6.30	0.630	3.00	0.300	6.0 / 400
9SBDGE-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
9SBDG□ -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		
9SBDG□ -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





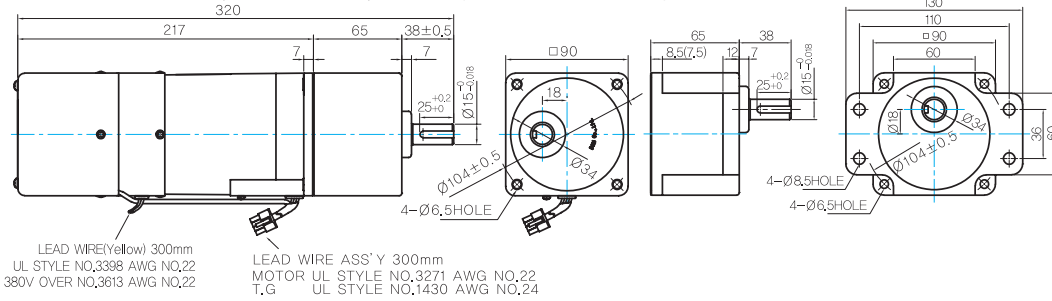
## GEARED MOTOR

### ☉ P TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-90F2P (POWERFUL FAN)

- GEARBOX MODEL:  
9PBK□BH

- GEARBOX MODEL:  
9PFK□BH



- GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9PBK□BH 9PFK□BH	

- KEY SPEC

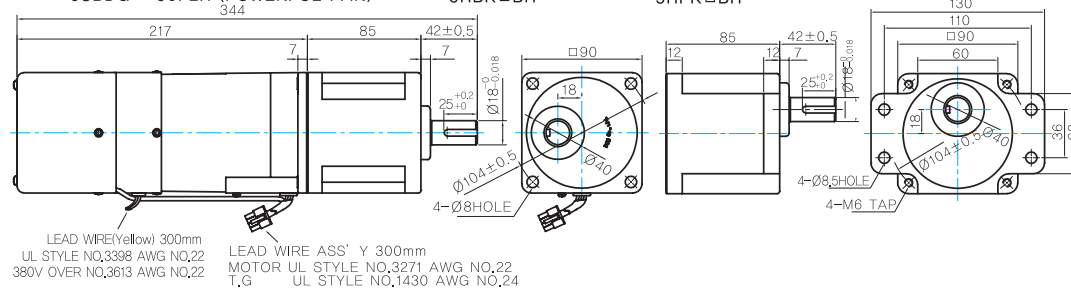
GEARBOX	

### ☉ H TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-90F2H (POWERFUL FAN)

- GEARBOX MODEL:  
9HBK□BH

- GEARBOX MODEL:  
9HFK□BH



- GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9HBK□BH 9HFK□BH	

- KEY SPEC

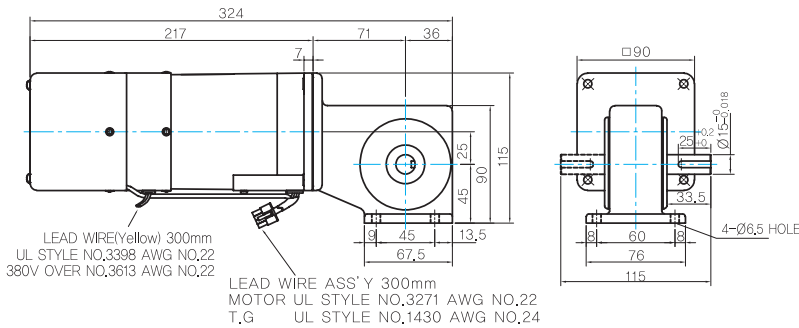
GEARBOX	

### ☉ W TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-90F2W (POWERFUL FAN)

- GEARBOX MODEL:  
9WD□BL/BR/BRL

- KEY SPEC



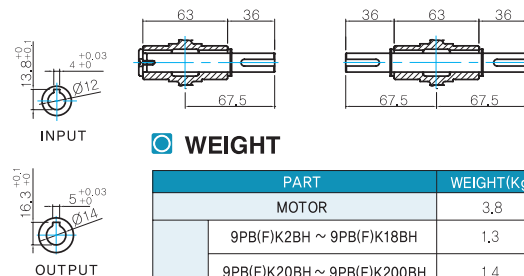
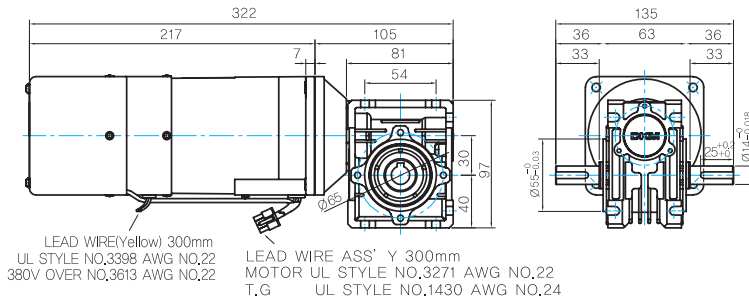
GEARBOX	

### ☉ WH TYPE GEARBOX

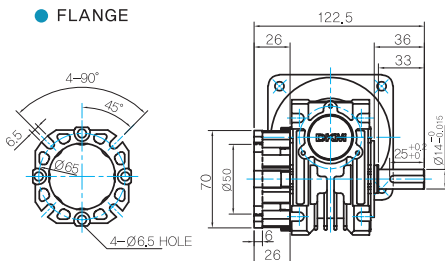
- MOTOR MODEL:  
9SBDG□-90F2WH (POWERFUL FAN)

- GEARBOX MODEL:  
9WHD□-030

- SHAFT(Unidirectional, Bi-directional)



- FLANGE



- KEY SPEC

GEARBOX	

\* The output flange and shafts are sold separately.

### ☉ WEIGHT

PART	WEIGHT(Kg)
MOTOR	3.8
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



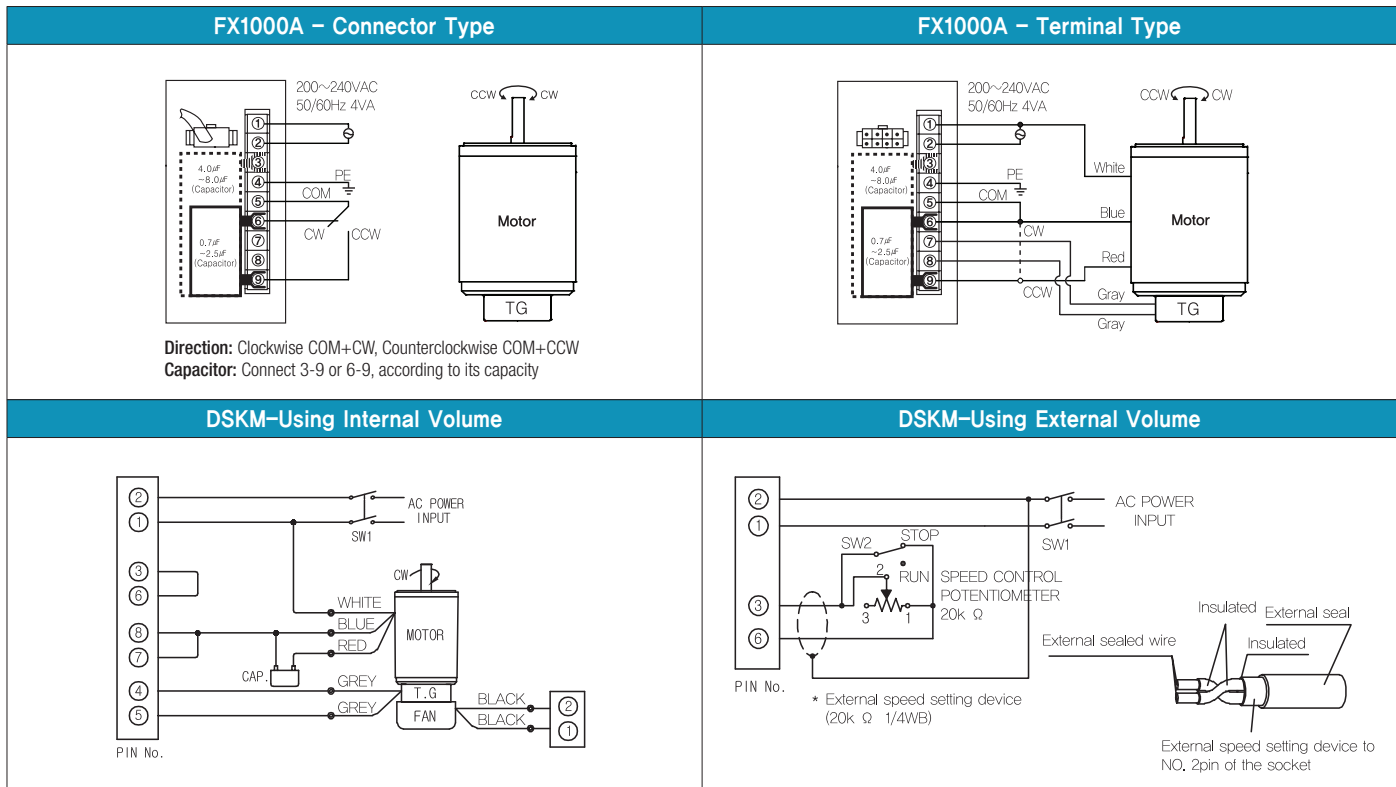
# B AC Motors

## S.C. Brake Motor 90W (□90mm)

### Motor Images



### 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.

# 120W

Speed Control  
Brake Motor  
120W(□90mm)

## Motor Specification

Model 9SBDG*-120F2□: Gear Type Shaft 9SBD*-120F2: D-Cut Type Shaft 9SBDK*-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	
9SBDGA-120F2□	120	1∅110	60	4	30min.	90-1700	7.80	0.780	7.50	0.750	4.20	0.420	30.0 / 250
9SBDGD-120F2□	120	1∅220	60	4	30min.	90-1700	7.80	0.780	7.50	0.750	4.20	0.420	6.5 / 400
9SBDGE-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
9SBDG□ -120F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	12.5 1.22	18.7 1.83	22.4 2.20	31.1 3.05	37.4 3.66	46.7 4.58	56.0 5.49	70.3 6.89	84.4 8.27	101.3 9.92	102.0 10.00
			220	60	kgfcm N.m	12.5 1.22	18.7 1.83	22.4 2.20	31.1 3.05	37.4 3.66	46.7 4.58	56.0 5.49	70.3 6.89	84.4 8.27	101.3 9.92	102.0 10.00
			220/ 240	50	kgfcm N.m	12.0 1.17	17.9 1.76	21.5 2.11	29.9 2.93	35.9 3.51	44.8 4.39	53.8 5.27	67.5 6.62	81.0 7.94	97.2 9.53	102.0 10.00
		90	110	60	kgfcm N.m	7.0 0.68	10.5 1.02	12.5 1.23	17.4 1.71	20.9 2.05	26.1 2.56	31.4 3.07	39.4 3.86	47.3 4.63	56.7 5.56	57.1 5.60
			220	60	kgfcm N.m	7.0 0.68	10.5 1.02	12.5 1.23	17.4 1.71	20.9 2.05	26.1 2.56	31.4 3.07	39.4 3.86	47.3 4.63	56.7 5.56	57.1 5.60
			220/ 240	50	kgfcm N.m	6.6 0.65	10.0 0.98	12.0 1.17	16.6 1.63	19.9 1.95	24.9 2.44	29.9 2.93	37.5 3.68	45.0 4.41	54.0 5.29	54.4 5.33

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200		
9SBDG□ -120F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	127.5 12.50	153.0 14.99	183.6 17.99	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	60	kgfcm N.m	127.5 12.50	153.0 14.99	183.6 17.99	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	122.4 12.00	146.9 14.39	176.3 17.27	195.8 19.19	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	71.4 7.00	85.7 8.40	102.8 10.08	114.2 11.20	142.8 13.99	171.4 16.79	192.2 18.83	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	71.4 7.00	85.7 8.40	102.8 10.08	114.2 11.20	142.8 13.99	171.4 16.79	192.2 18.83	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	68.0 6.66	81.6 8.00	97.9 9.60	108.8 10.66	136.0 13.33	163.2 15.99	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	200.0 19.60	200.0 19.60

# B AC Motors

## S.C. Brake 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				
9SBDG□ -120F2H	9HBK □BH 9HFK □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	29.40	29.40
					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	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	29.40	
		90	110	60	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	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
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	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	29.40	29.40	29.40			
220/240	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	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	29.40		
			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	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	29.40	29.40				

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SBDG□ -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
					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			
		90	110	60	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
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					
220/240	220	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		
			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					

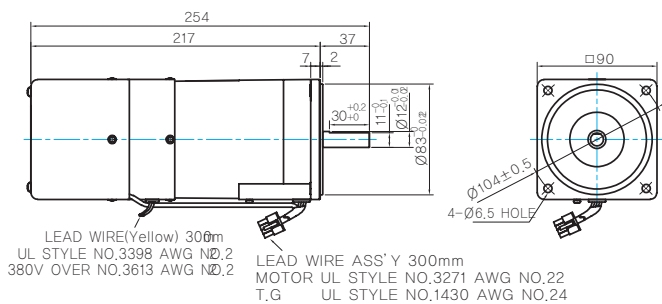
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
9SBDG□ -120F2WH	9WH□-030	1200	110	60	kgfcm	47.3	60.8	85.5	108.0	123.8	144.0	177.0	173.5	163.3	132.7
					N.m	4.63	5.95	8.38	10.58	12.13	14.11	17.35	17.00	16.00	13.00
					kgfcm	47.3	60.8	85.5	108.0	123.8	144.0	177.0	173.5	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			
		90	110	60	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
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					
220/240	220	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		
			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					

- 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.

### Dimensions

#### MOTOR ONLY

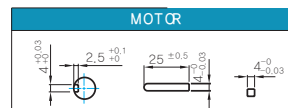
- MOTOR MODEL:  
9SBD□-120F2 (POWERFUL FAN)



#### MOTOR OUTPUT SHAFT

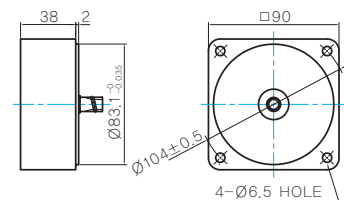
MODEL	SPEC
D-CUT TYPE	
9SBD□-120F	
KEY TYPE	
9SBD□-120F	

#### KEY SPEC



#### INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□



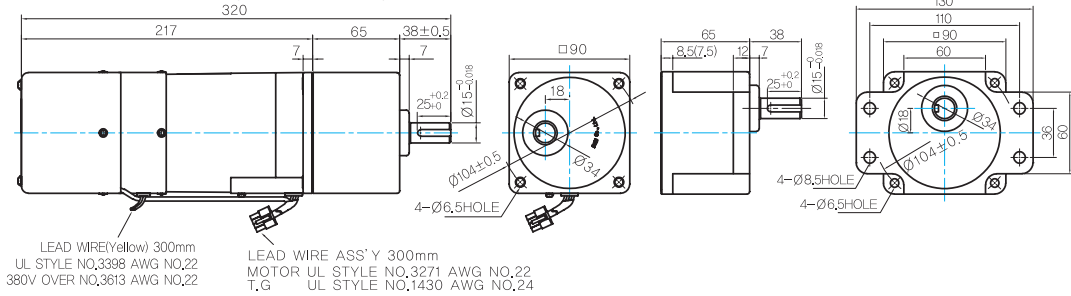
## GEARED MOTOR

### □ P TYPE GEARBOX

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

● GEARBOX MODEL:  
9PBK□BH

● GEARBOX MODEL:  
9PFK□BH



LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

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

● GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

● KEY SPEC

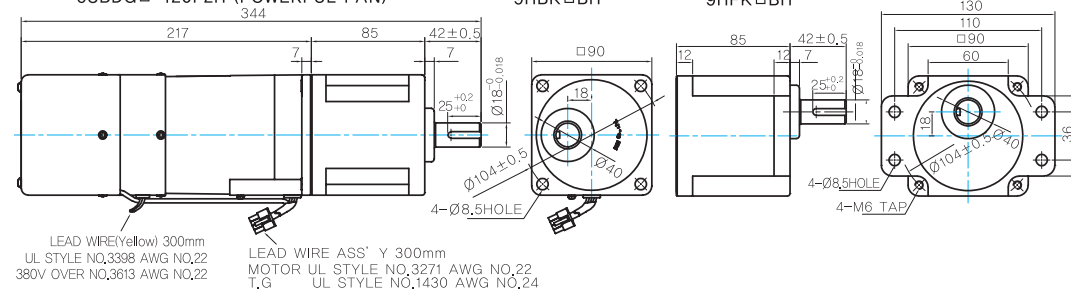
GEARBOX	

### □ H TYPE GEARBOX

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

● GEARBOX MODEL:  
9HBK□BH

● GEARBOX MODEL:  
9HFK□BH



LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

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

● GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

● KEY SPEC

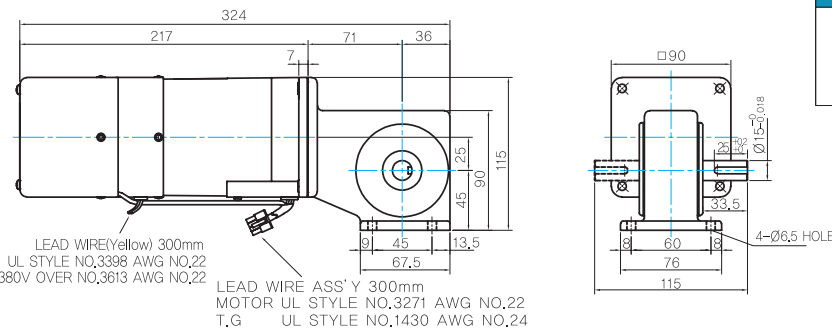
GEARBOX	

### □ W TYPE GEARBOX

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

● GEARBOX MODEL:  
9WD□BL/BR/BRL

● KEY SPEC



LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

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

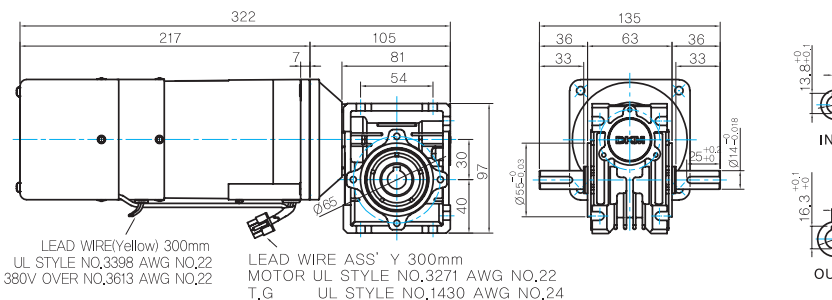
GEARBOX	

### □ WH TYPE GEARBOX

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

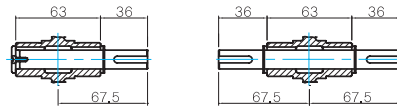
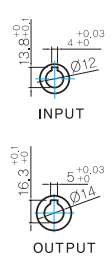
● GEARBOX MODEL:  
9WHD□-030

● SHAFT(Unidirectional, Bi-directional)



LEAD WIRE(Yellow) 300mm  
UL STYLE NO,3398 AWG NO,22  
380V OVER NO,3613 AWG NO,22

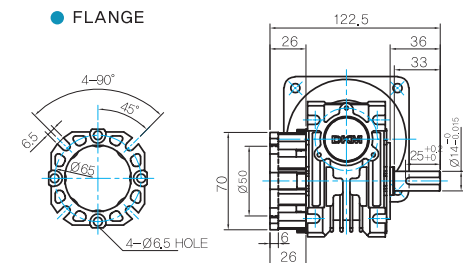
LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,22  
T,G UL STYLE NO,1430 AWG NO,24



### □ WEIGHT

PART	WEIGHT(Kg)
MOTOR	3,8
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

● FLANGE



● KEY SPEC

GEARBOX	

\* The output flange and shafts are sold separately.

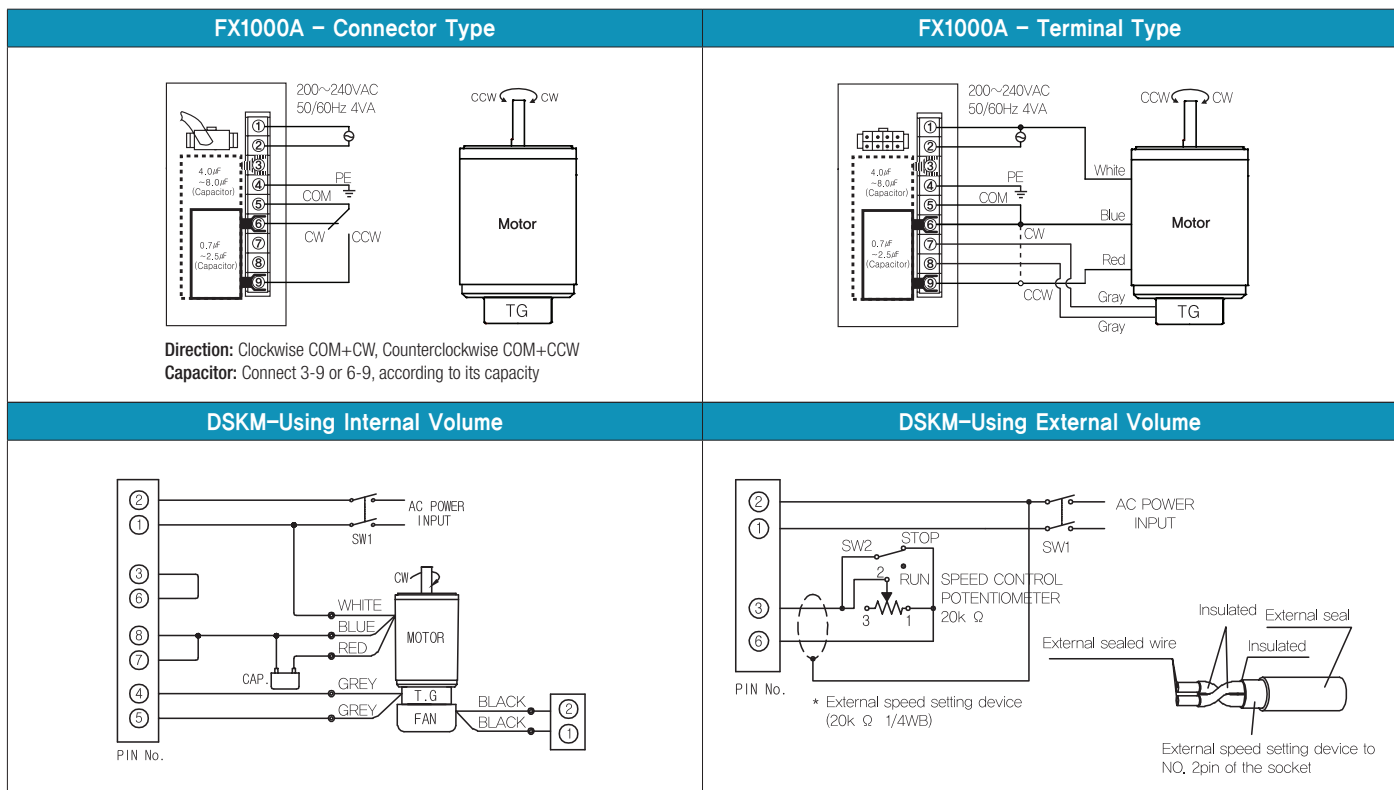
# B AC Motors

S.C. Brake Motor 120W (□90mm)

## Motor Images



## 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.

# 180W

Speed Control  
Brake Motor  
180W (□90mm)

## Motor Specification

Model 9SBDG*-180F2□: Gear Type Shaft 9SBD*-180F2: D-Cut Type Shaft 9SBDK*-180F2: 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	
9SBDGD-180F2□	180	1∅220	60	4	30min.	90-1700	8.40	0.840	10.00	1.000	6.60	0.660	8.0 / 400
9SBDGE-180F2□	180	1∅220	50	4	30min.	90-1400	6.20	0.620	10.00	1.000	6.60	0.660	8.0 / 400
		1∅240					7.10	0.710	12.00	1.200	7.50	0.750	

- 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	3	3.6	6	9	12.5	15	18	20	25
9SBDG□ -180F2H	9HBK□BH 9HFK□BH	1200	220	60	kgfcm N.m	24.9 2.44	29.9 2.93	49.8 4.88	74.7 7.32	93.8 9.19	112.5 11.03	135.0 13.23	136.0 13.33	170.0 16.66
			220/ 240	50	kgfcm N.m	29.9 2.93	35.9 3.51	59.8 5.86	89.6 8.78	124.5 12.20	149.4 14.64	179.3 17.57	199.2 19.52	249.0 24.40
		90	220	60	kgfcm N.m	16.4 1.61	19.7 1.93	32.9 3.22	49.3 4.83	61.9 6.06	74.3 7.28	89.1 8.73	89.8 8.80	112.2 11.00
			220/ 240	50	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

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	50	60	75	90	100	120	150	180	200
9SBDG□ -180F2H	9HBK□BH 9HFK□BH	1200	220	60	kgfcm N.m	204.0 19.99	244.8 23.99	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	298.8 29.28	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	300.0 29.40
		90	220	60	kgfcm N.m	134.6 13.19	161.6 15.83	224.4 21.99	269.3 26.39	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	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

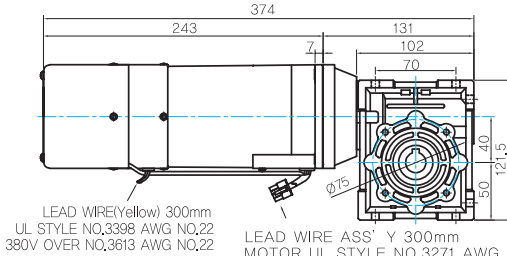
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
9SBDG□ -180F2WH	9WHD□-030 9WHD□-040	1200	220	60	kgfcm N.m	63.0 6.17	81.0 7.94	114.0 11.17	144.0 14.11	165.0 16.17	192.0 18.82	183.7 18.00	173.5 17.00	163.3 16.00	132.7 13.00
			220/240	50	kgfcm N.m	75.6 7.41	97.2 9.53	136.8 13.41	172.8 16.93	198.0 19.40	204.1 20.00	183.7 18.00	173.5 17.00	163.3 16.00	132.7 13.00
		90	220	60	kgfcm N.m	41.6 4.07	53.5 5.24	75.2 7.37	95.0 9.31	108.9 10.67	126.7 12.42	155.8 15.26	173.5 17.00	163.3 16.00	132.7 13.00
			220/240	50	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

- 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.

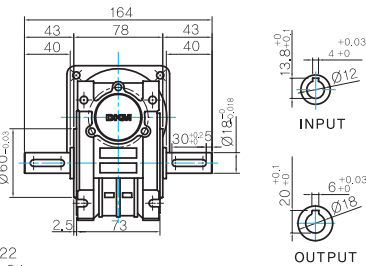




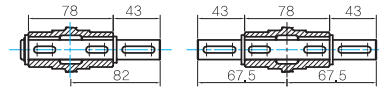
● MOTOR MODEL:  
9WHD□-180F2WH (POWERFUL FAN)



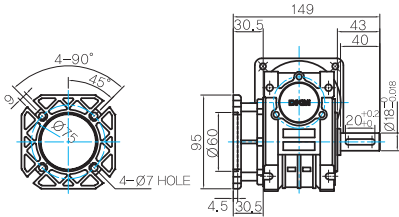
● GEARBOX MODEL:  
9WHD□-040



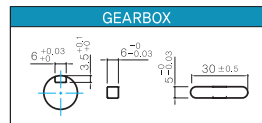
● SHAFT(Unidirectional, Bi-directional)



● FLANGE



● KEY SPEC

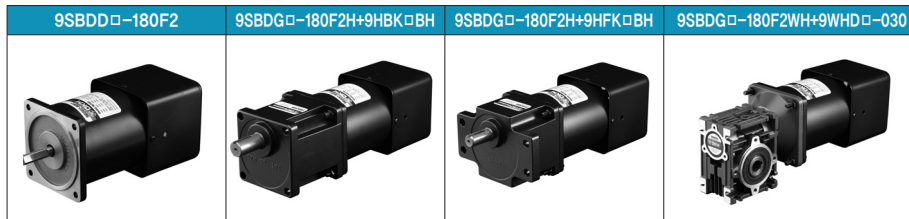


\* The output flange and shafts are sold separately.

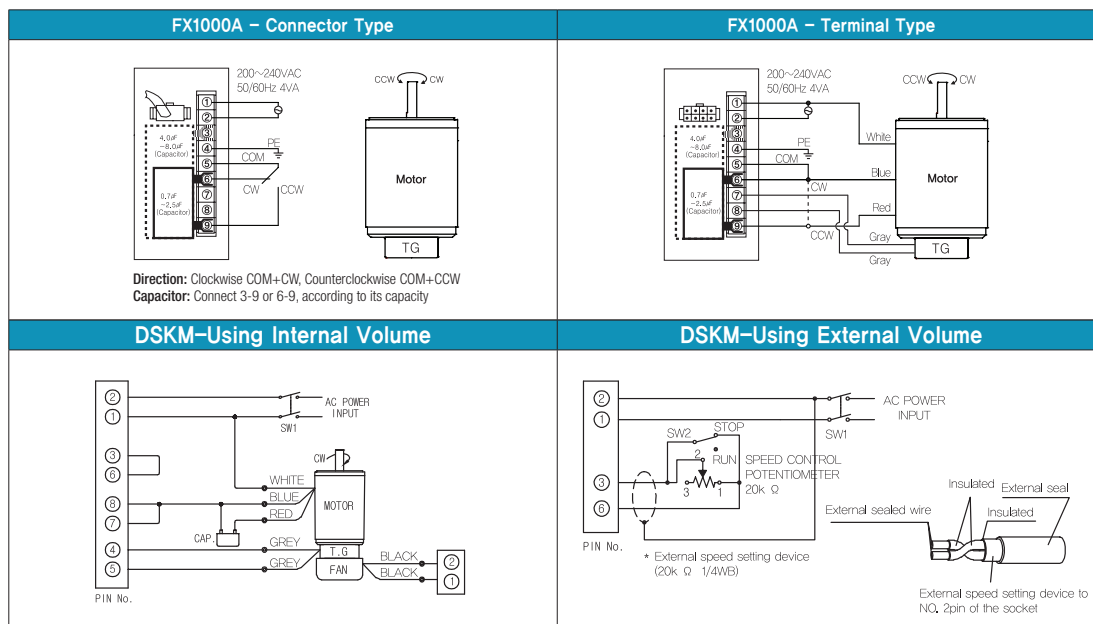
● WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3,8	
GEAR BOX	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
	9WHD□-040	2,2
	9XD10□	0,5

Motor Images



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.