

## HOCHQUALITATIVE AC- UND DC-MOTOREN



**MIT STIRNRAD-, SCHNECKEN-  
ODER HELICROSSGETRIEBE**





# Clutch & Brake Motor



Clutch & Brake Motor

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# B AC Motors

## Outline of Clutch & Brake

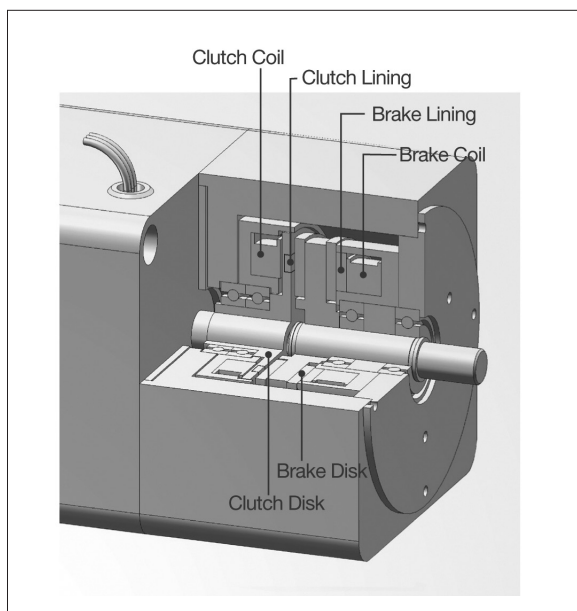
### Clutch & Brake Mechanism

An internal clutch & brake mechanism for use with a gearbox is employed in clutch & brake motor. By the combination of a constantly rotating induction motor and a clutch and brake unit, the function of frequent start/stop, positioning, indexing, jogging and incremental feeding are available.

DKM's clutch & brake motor is designed for the quicker response time and higher torque to move the load. To meet high-frequency, starting and stopping applications, DKM uses induction motor for its continuous duty rating. So clutch & brake motor is not suitable for frequent bi-directional starting and stopping motion but suitable for unidirectional movement.

### Structure and Mechanism

Output shaft is controlled by the use of the clutch and brake mechanism.



#### Run

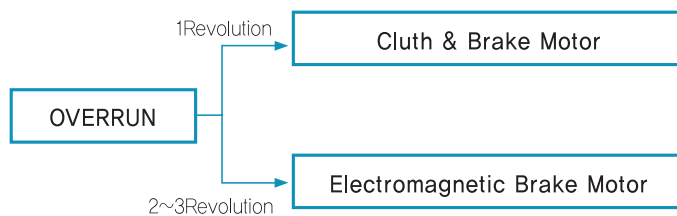
When the 24 VDC is applied to the clutch coil, the armature of the clutch coil is drawn to the clutch plate. And the rotational force of the motor is transmitted to the output shaft of the gearbox.

#### Stopping and Load Holding

By removing the 24 VDC from the clutch coil and, after a certain time lag, applying the 24 VDC to the brake coil, the output shaft will come to a stop.

During braking the output shaft is released from the motor shaft, so the shaft may be stopped without being influenced by motor inertia. The motor will continue to rotate.

### Brake Motor Selecting [Selecting from stopping accuracy]



\* The OVERRUN Values are those of an individual motor

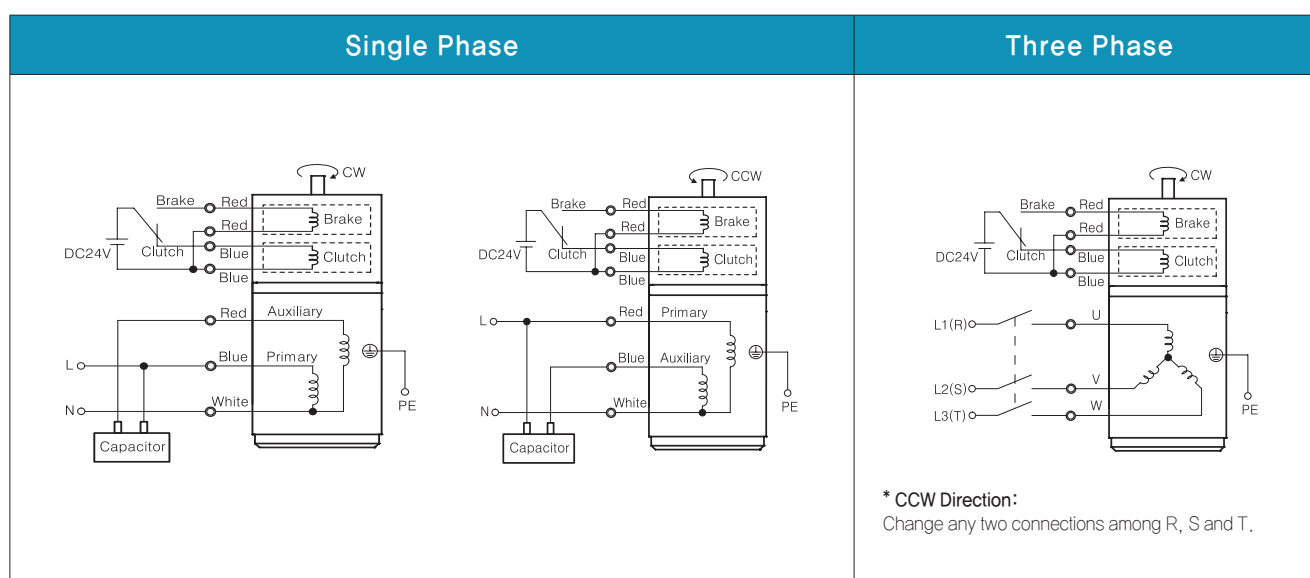
## General Specifications

Item	Specification
Insulation Resistance	100MΩ or more when DC500V MEGA is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5KV at 50Hz and 60Hz applied between the windings and the frame for 1 minute after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 80°C or less measured by the resistance change method after rated motor operation with connecting a gearbox or equivalent heat radiation plate.
Insulation Class	Class B [130°C]
Overheat Protection	Operating temperature (Built-in thermal protector type motor): Open 120°C±5°C, Close 90°C±5°C
Ambient Temperature	-10°C~+40°C (Three phase 220VAC: -10°C~+50°C)
Ambient Humidity	85% maximum

## Clutch & Brake Specification

Model		Voltage (V)	Current (A)	Input (W)	Brake Torque (kgfcm)
□ 80mm C&B	Clutch	DC24	0.36	8.7	6
	Brake	DC24	0.32	7.7	25
□ 90mm C&B	Clutch	DC24	0.37	8.9	20
	Brake	DC24	0.33	7.9	35

## Connection Diagrams



# B AC Motors

## Clutch & Brake Motor 15W (□ 80mm)

# 15W

Clutch & Brake Motor  
15W(□ 80mm)

### Motor Image



### Motor Specification

Model 8CIDG*-15G: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
<b>Lead Wire Type</b>												
8CIDG1(A)-15G	15	1φ110	60	4	Cont.	0.95	0.095	1600	0.54	0.92	0.092	3.5 / 250
8CIDG2(D)-15G	15	1φ220	60	4	Cont.	1.25	0.125	1600	0.23	0.92	0.092	1.2 / 450
8CIDGE-15G	15	1φ220	50	4	Cont.	1.05	0.105	1300	0.23	1.13	0.113	1.0 / 450
		1φ240				1.27	0.127		0.25	1.13	0.113	
8CIDG3(G)-15G	15	3φ220	50	4	Cont.	7.61	0.761	1350	0.29	1.09	0.109	-
			60			6.15	0.615	1600	0.26	0.92	0.092	
		3φ230	50	4	Cont.	8.25	0.825	1350	0.32	1.09	0.109	
			60			6.72	0.672	1600	0.28	0.92	0.092	
8CIDG4(K)-15G	15	3φ380	50	4	Cont.	5.70	0.570	1350	0.12	1.09	0.109	-
			60			4.53	0.453	1600	0.11	0.92	0.092	
		3φ400	50	4	Cont.	6.26	0.626	1350	0.13	1.09	0.109	
			60			5.03	0.503	1600	0.12	0.92	0.092	
8CIDG5(L)-15G	15	3φ415	50	4	Cont.	6.68	0.668	1350	0.14	1.09	0.109	-
			60			5.40	0.540	1600	0.12	0.92	0.092	
		3φ440	50	4	Cont.	7.39	0.739	1350	0.15	1.09	0.109	
			60			6.02	0.602	1600	0.13	0.92	0.092	

1) Enter the phase & voltage code in the place \* within the motor model name.

2) The phase & voltage code A, D, E, G, K, L contain a built-in thermal protector.

3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

※ It is not possible to use an inverter for three phase 380~440V motor. When the inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio r/min	3 600	3.6 500	5 360	6 300	7.5 240	9 200	10 180	12.5 144	15 120	18 100	20 90	25 72	30 60	36 50	40 45	50 36	60 30	75 24	90 20	100 18	120 15
8CIDG*-15G	8GBK□ BMH	kgfcm	2.2	2.7	3.7	4.5	5.6	6.7	7.5	9.3	11.2	13.4	13.4	16.8	20.1	24.0	26.7	30.4	36.4	45.5	54.6	60.7	72.9
		N.m	0.22	0.26	0.37	0.44	0.55	0.66	0.73	0.91	1.10	1.31	1.31	1.65	1.97	2.35	2.61	2.98	3.57	4.46	5.36	5.95	7.14

Motor Model	Gearbox Model	Gear Ratio r/min	150 12	180 10	200 9	250 7	300 6	360 5
8CIDG*-15G	8GBK□ BMH	kgfcm	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84	7.84	7.84

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio r/min	3 500	3.6 417	5 300	6 250	7.5 200	9 167	10 150	12.5 120	15 100	18 83	20 75	25 60	30 50	36 42	40 37.5	50 30	60 25	75 20	90 17	100 15	120 12.5
8CIDG*-15G	8GBK□ BMH	kgfcm	2.6	3.2	4.4	5.3	6.6	7.9	8.8	11.0	13.1	15.8	15.8	19.8	23.7	28.4	31.6	35.7	42.9	53.6	64.3	71.4	80.0
		N.m	0.26	0.31	0.43	0.52	0.64	0.77	0.86	1.07	1.29	1.55	1.55	1.94	2.32	2.79	3.10	3.50	4.20	5.25	6.30	7.00	7.84

Motor Model	Gearbox Model	Gear Ratio r/min	150 10	180 8	200 7.5	250 6	300 5	360 4
8CIDG*-15G	8GBK□ BMH	kgfcm	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84	7.84	7.84

1) Enter the phase & voltage code in the place \* 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.

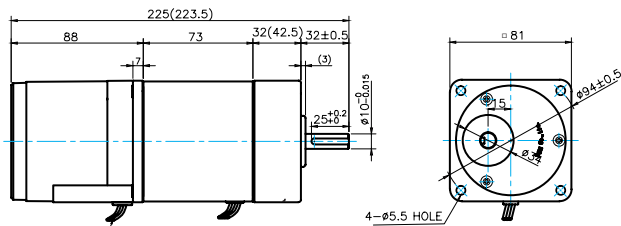
## Dimensions

### GEARED MOTOR

#### G TYPE GEARBOX

● MOTOR MODEL:  
8CIDG□-15G

● GEARBOX MODEL:  
8GBK□BMH



LEAD WIRE 300mm  
UL STYLE NO.3271 AWG NO.22

C&B LEADWIRE 300

#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### 32(42.5)-Table1

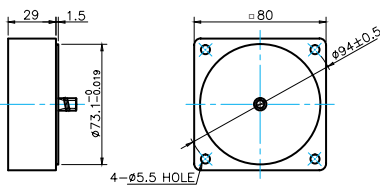
SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

#### KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

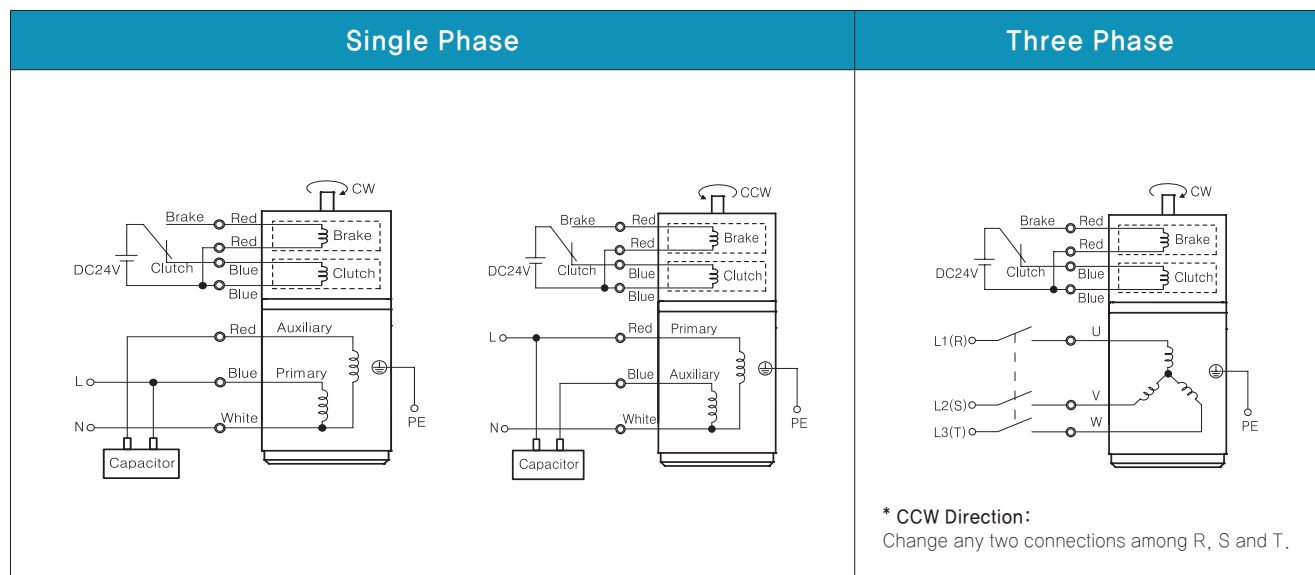
● MODEL:  
8XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2.73	
GEAR BOX	8GBK3BMH - 8GBK18BMH	0.56
	8GBK20BMH - 8GBK40BMH	0.65
	8GBK50BMH - 8GBK360BMH	0.72
	8XD10□□	0.45

## Connection Diagrams



- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# B AC Motors

## Clutch & Brake Motor 25W (□ 80mm)

# 25W

Clutch & Brake Motor  
25W(□ 80mm)

### Motor Image



### Motor Specification

Model 8CIDG*-25G: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
<b>Lead Wire Type</b>												
<b>8CIDG1(A)-25G</b>	25	1φ110	60	4	Cont.	1.63	0.163	1600	0.55	1.55	0.155	6.0 / 250
<b>8CIDG2(D)-25G</b>	25	1φ220	60	4	Cont.	1.59	0.159	1550	0.27	1.60	0.160	1.5 / 450
<b>8CIDGE-25G</b>	25	1φ220	50	4	Cont.	1.57	0.157	1250	0.23	1.95	0.195	1.5 / 450
		1φ240				1.87	0.187		0.25	1.95	0.195	
<b>8CIDG3(G)-25G</b>	25	3φ220	50	4	Cont.	7.61	0.761	1350	0.29	1.85	0.185	-
			60			6.15	0.615	1600	0.26	1.55	0.155	
		3φ230	50	4	Cont.	8.25	0.825	1350	0.32	1.85	0.185	
			60			6.72	0.672	1600	0.28	1.55	0.155	
<b>8CIDG4(K)-25G</b>	25	3φ380	50	4	Cont.	5.70	0.570	1300	0.13	1.90	0.190	-
			60			4.53	0.453	1550	0.12	1.60	0.160	
		3φ400	50	4	Cont.	6.26	0.626	1300	0.14	1.90	0.190	
			60			5.03	0.503	1550	0.13	1.60	0.160	
<b>8CIDG5(L)-25G</b>	25	3φ415	50	4	Cont.	6.68	0.668	1300	0.15	1.90	0.190	-
			60			5.40	0.540	1550	0.13	1.60	0.160	
		3φ440	50	4	Cont.	7.39	0.739	1300	0.16	1.90	0.190	
			60			6.02	0.602	1550	0.14	1.60	0.160	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
  - 2) The phase & voltage code A, D, E, G, K, L contain a built-in thermal protector.
  - 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)
- ※ It is not possible to use an inverter for three phase 380~440V motor. When the inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120
<b>8CIDG*-25G</b>	<b>8GBK□ BMH</b>	kgfcm	3.7	4.4	6.2	7.4	9.2	11.1	12.3	15.4	18.5	22.2	22.2	27.8	33.3	40.0	44.4	50.2	60.3	80.0	80.0	80.0	80.0
		N.m	0.36	0.43	0.60	0.72	0.91	1.09	1.21	1.51	1.81	2.17	2.18	2.72	3.27	3.92	4.35	4.92	5.91	7.84	7.84	7.84	7.84

Motor Model	Gearbox Model	Gear Ratio	150	180	200	250	300	360
<b>8CIDG*-25G</b>	<b>8GBK□ BMH</b>	r/min	12	10	9	7	6	5
		kgfcm	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84	7.84	

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120
<b>8CIDG*-25G</b>	<b>8GBK□ BMH</b>	kgfcm	4.4	5.3	7.3	8.8	11.0	13.1	14.6	18.3	21.9	26.3	26.3	32.9	39.5	47.4	52.7	59.5	80.0	80.0	80.0	80.0	80.0
		N.m	0.43	0.52	0.72	0.86	1.07	1.29	1.43	1.79	2.15	2.58	2.58	3.23	3.87	4.65	5.16	5.83	7.84	7.84	7.84	7.84	7.84

Motor Model	Gearbox Model	Gear Ratio	150	180	200	250	300	360
<b>8CIDG*-25G</b>	<b>8GBK□ BMH</b>	r/min	10	8	7.5	6	5	4
		kgfcm	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	7.84	7.84	7.84	7.84	7.84	

- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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

### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL:  
8CIDG□-25G

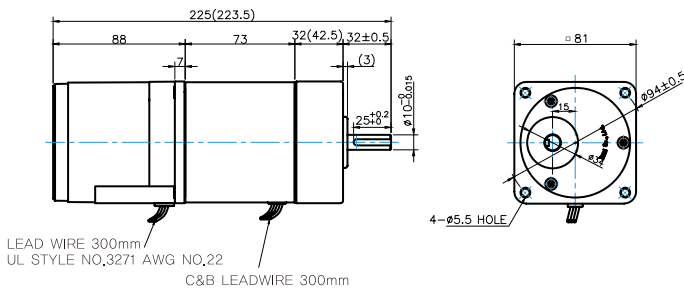
- GEARBOX MODEL:  
8GBK□BMH

#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH – 8GBK18BMH
42.5	8GBK20BMH – 8GBK360BMH

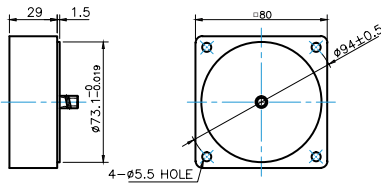


#### KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

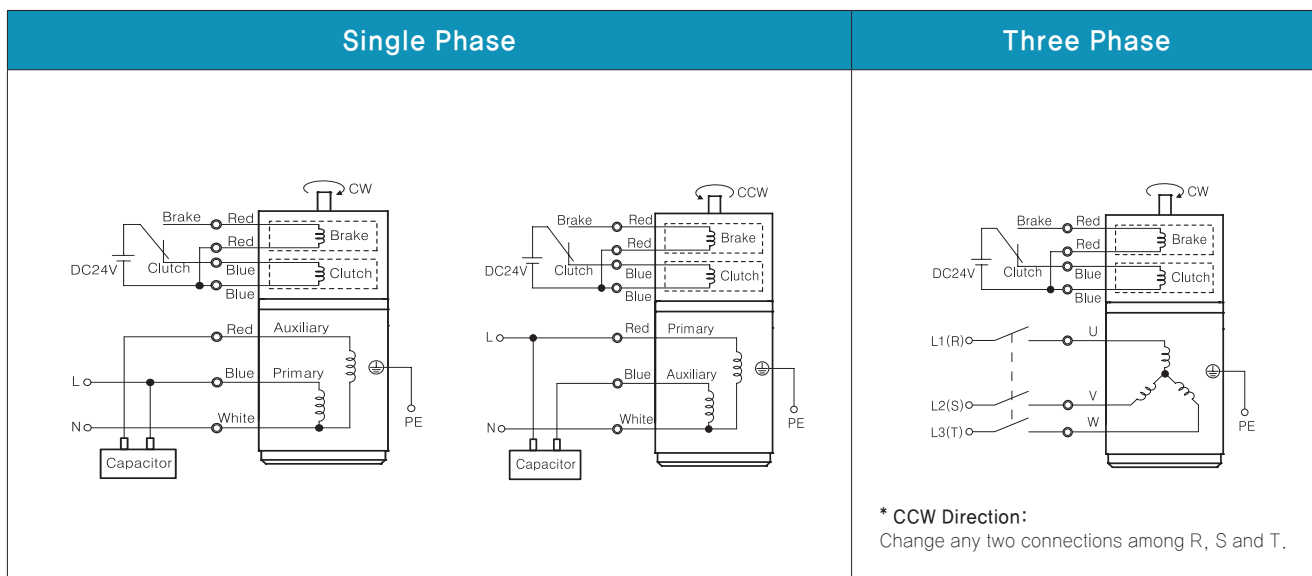
- MODEL:  
8XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2.73	
GEAR BOX	8GBK3BMH – 8GBK18BMH	0.56
	8GBK20BMH – 8GBK40BMH	0.65
	8GBK50BMH – 8GBK360BMH	0.72
	8XD10□□	0.45

## Connection Diagrams



- 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.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

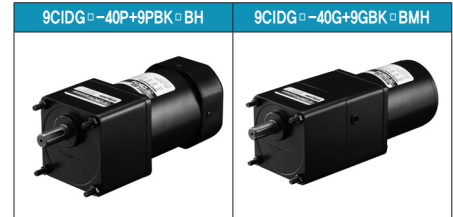


# B AC Motors

## Clutch & Brake Motor 40W (□ 90mm)

**40W** Clutch & Brake Motor  
40W(□ 90mm)

### Motor Image



### Motor Specification

Model 9CIDG*-40G: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
9CIDG1(A)-40□	40	1φ110	60	4	Cont.	2.60	0.260	1600	0.80	2.50	0.244	10.0 / 250
9CIDG2(D)-40□	40	1φ220	60	4	Cont.	2.60	0.260	1600	0.45	2.50	0.244	2.5 / 450
9CIDGE-40□	40	1φ220	50	4	Cont.	2.10	0.210	1300	0.33	3.00	0.300	2.0 / 450
		1φ240				2.60	0.260		0.36	3.00	0.300	
9CIDG3(G)-40□	40	3φ220	50	4	Cont.	9.90	0.990	1350	0.33	2.90	0.289	-
			60			7.90	0.790	1600	0.31	2.50	0.244	
		3φ230	50	4	Cont.	10.80	1.080	1350	0.35	2.90	0.289	
			60			8.50	0.850	1600	0.33	2.50	0.244	
9CIDG4(K)-40□	40	3φ380	50	4	Cont.	10.20	1.020	1350	0.19	2.90	0.289	-
			60			8.00	0.800	1600	0.18	2.50	0.244	
		3φ400	50	4	Cont.	11.10	1.110	1350	0.20	2.90	0.289	
			60			8.80	0.880	1600	0.19	2.50	0.244	
9CIDG5(L)-40□	40	3φ415	50	4	Cont.	10.00	1.000	1350	0.17	2.90	0.289	-
			60			8.00	0.800	1600	0.16	2.50	0.244	
		3φ440	50	4	Cont.	11.10	1.110	1350	0.18	2.90	0.289	
			60			8.90	0.890	1600	0.17	2.50	0.244	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
  - 2) The phase & voltage code A, D, E, G, K, L contain a built-in thermal protector.
  - 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)
- ※ It is not possible to use an inverter for three phase 380~440V motor. When the inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
9CIDG*-40G	9GBK□ BMH	r/min	900	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9
		kgfcm	3.9	5.9	7.1	9.9	11.8	14.8	17.8	19.7	24.7	29.6	35.5	35.6	44.4	53.3	64.0	71.1	80.4	96.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.39	0.58	0.70	0.97	1.16	1.45	1.74	1.93	2.42	2.90	3.48	3.48	4.35	5.23	6.27	6.97	7.87	9.45	9.80	9.80	9.80	9.80	9.80	9.80	9.80

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
9CIDG*-40P	9PBK□ 9PFK□	r/min	900	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9
		kgfcm	3.9	5.9	7.1	9.9	11.8	14.8	17.8	19.7	22.2	26.7	32.0	35.6	40.2	48.2	57.9	64.3	80.4	96.4	107.7	129.3	143.7	172.4	200.0	200.0	200.0
		N.m	0.39	0.58	0.70	0.97	1.16	1.45	1.74	1.93	2.18	2.61	3.14	3.48	3.94	4.72	5.67	6.30	7.87	9.45	10.56	12.67	14.08	16.90	19.60	19.60	

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
9CIDG*-40G	9GBK□ BMH	r/min	750	500	417	300	250	200	167	150	120	100	83	75	60	50	42	38	30	25	20	17	15	13	10	8	7
		kgfcm	4.7	7.0	8.4	11.7	14.0	17.5	21.0	23.4	29.2	35.1	42.1	42.1	52.7	63.2	75.8	84.3	95.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.46	0.69	0.82	1.15	1.37	1.72	2.06	2.29	2.86	3.44	4.12	4.13	5.16	6.19	7.43	8.26	9.33	9.80	9.80	9.80	9.80	9.80	9.80	9.80	

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
9CIDG*-40P	9PBK□ 9PFK□	r/min	750	500	417	300	250	200	167	150	120	100	83	75	60	50	42	37.5	30	25	20	17	15	12.5	10	8	7.5
		kgfcm	4.7	7.0	8.4	11.7	14.0	17.5	21.0	23.4	26.3	31.6	37.9	42.1	47.6	57.1	68.6	76.2	95.2	114.3	127.7	153.2	170.3	200.0	200.0	200.0	200.0
		N.m	0.46	0.69	0.82	1.15	1.37	1.72	2.06	2.29	2.58	3.10	3.72	4.13	4.67	5.60	6.72	7.47	9.33	11.20	12.51	15.02	16.69	19.60	19.60	19.60	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.



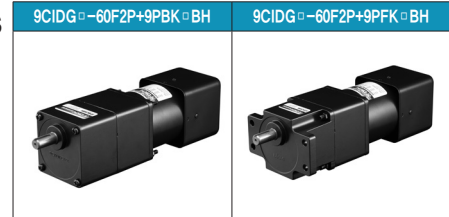
# B AC Motors

## Clutch & Brake Motor 60W (□ 90mm)

# 60W

Clutch & Brake Motor  
60W(□ 90mm)

### Motor Images



### Motor Specification

Model 9CIDG*-60F2P: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
<b>Lead Wire Type</b>												
9CIDG1(A)-60F2P	60	1φ110	60	4	Cont.	4.30	0.430	1600	1.30	3.70	0.370	16.0 / 250
9CIDG2(D)-60F2P	60	1φ220	60	4	Cont.	4.20	0.420	1600	0.68	3.70	0.370	4.0 / 450
9CIDGE-60F2P	60	1φ220	50	4	Cont.	3.90	0.390	1300	0.48	4.50	0.450	3.5 / 450
		1φ240				4.80	0.480		0.54	4.50	0.450	
9CIDG3(G)-60F2P	60	3φ220	50	4	Cont.	17.20	1.720	1350	0.59	4.40	0.440	-
			60			13.80	1.380	1600	0.53	3.70	0.370	
		3φ230	50	4	Cont.	18.80	1.880	1350	0.62	4.40	0.440	
			60			15.00	1.500	1600	0.56	3.70	0.370	
9CIDG4(K)-60F2P	60	3φ380	50	4	Cont.	16.70	1.670	1350	0.31	4.40	0.440	-
			60			13.40	1.340	1600	0.28	3.70	0.370	
		3φ400	50	4	Cont.	18.30	1.830	1350	0.34	4.40	0.440	
			60			14.70	1.470	1600	0.30	3.70	0.370	
9CIDG5(L)-60F2P	60	3φ415	50	4	Cont.	16.70	1.670	1350	0.29	4.40	0.440	-
			60			13.40	1.340	1600	0.26	3.70	0.370	
		3φ440	50	4	Cont.	18.50	1.850	1350	0.31	4.40	0.440	
			60			15.00	1.500	1600	0.28	3.70	0.370	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
  - 2) The phase & voltage code A, D, E, G, K, L contain a built-in thermal protector.
  - 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)
- ※ It is not possible to use an inverter for three phase 380~440V motor. When the inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60
			900	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30
9CIDG*-60F2P	9PBK□BH	kgfcm	6.0	9.0	10.8	15.0	18.0	22.5	27.0	30.0	33.8	40.5	48.6	54.0	61.1	73.3	87.9	97.7	122.1	146.5
	9PFK□BH	N.m	0.59	0.88	1.06	1.47	1.76	2.20	2.64	2.94	3.31	3.97	4.76	5.29	5.98	7.18	8.62	9.57	11.97	14.36

Motor Model	Gearbox Model	Gear Ratio r/min	75	90	100	120	150	180	200
			24	20	18	15	12	10	9
9CIDG*-60F2P	9PBK□BH	kgfcm	163.7	196.5	200.0	200.0	200.0	200.0	200.0
	9PFK□BH	N.m	16.05	19.25	19.60	19.60	19.60	19.60	19.60

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60
			750	500	417	300	250	200	167	150	120	100	83	75	60	50	42	37.5	30	25
9CIDG*-60F2P	9PBK□BH	kgfcm	7.1	10.7	12.8	17.8	21.4	26.7	32.1	35.6	40.2	48.2	57.8	64.2	72.6	87.1	104.5	116.2	145.2	174.2
	9PFK□BH	N.m	0.70	1.05	1.26	1.75	2.10	2.62	3.14	3.49	3.93	4.72	5.67	6.30	7.11	8.54	10.25	11.38	14.23	17.08

Motor Model	Gearbox Model	Gear Ratio r/min	75	90	100	120	150	180	200
			20	17	15	12.5	10	8	7.5
9CIDG*-60F2P	9PBK□BH	kgfcm	194.7	200.0	200.0	200.0	200.0	200.0	200.0
	9PFK□BH	N.m	19.08	19.60	19.60	19.60	19.60	19.60	19.60

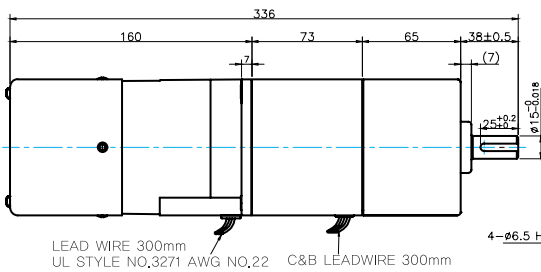
- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the rotation in the 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

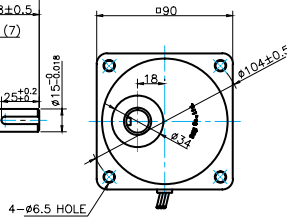
### GEARED MOTOR

#### P TYPE GEARBOX

- MOTOR MODEL:  
9CIDG□-60F2P (POWERFUL FAN)



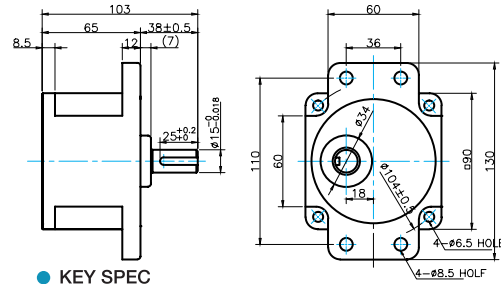
- GEARBOX MODEL:  
9PBK□BH



#### GEARBOX OUTPUT SHAFT

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

- GEARBOX MODEL:  
9PFK□BH

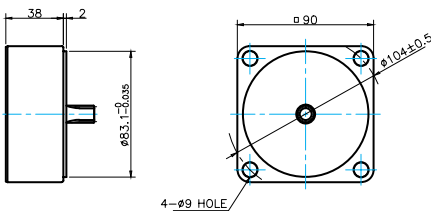


#### KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

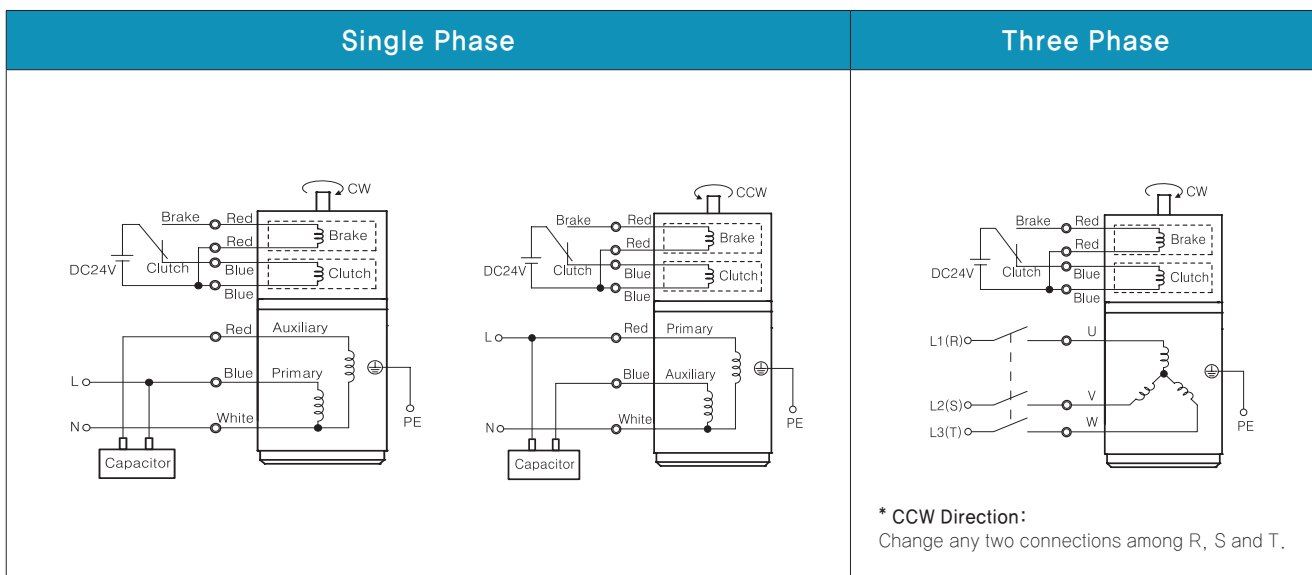
- MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4,4	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12.5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9XD10□□	0,6

## Connection Diagrams



- 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.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

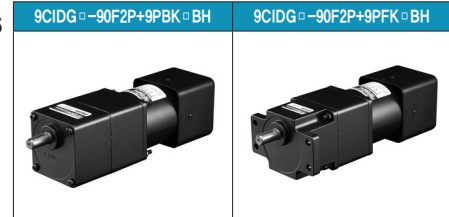
# B AC Motors

## Clutch & Brake Motor 90W (□ 90mm)

# 90W

Clutch & Brake Motor  
90W(□ 90mm)

### Motor Images



### Motor Specification

Model 9CIDG*~90F2P: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
<b>Lead Wire Type</b>												
9CIDG1(A)~90F2P	90	1φ110	60	4	Cont.	5.00	0.500	1600	1.80	5.50	0.550	20.0 / 250
9CIDG2(D)~90F2P	90	1φ220	60	4	Cont.	5.00	0.500	1600	1.00	5.50	0.550	5.0 / 450
9CIDGE~90F2P	90	1φ220	50	4	Cont.	5.30	0.530	1300	0.70	6.80	0.680	5.0 / 450
		1φ240				6.30	0.630		0.76	6.80	0.680	
9CIDG3(G)~90F2P	90	3φ220	50	4	Cont.	20.50	2.050	1350	0.65	6.50	0.650	-
			60			16.20	1.620	1600	0.60	5.50	0.550	
		3φ230	50	4	Cont.	22.00	2.200	1350	0.68	6.50	0.650	
			60			17.60	1.760	1600	0.63	5.50	0.550	
9CIDG4(K)~90F2P	90	3φ380	50	4	Cont.	20.00	2.000	1350	0.35	6.50	0.650	-
			60			15.70	1.570	1600	0.33	5.50	0.550	
		3φ400	50	4	Cont.	21.80	2.180	1350	0.37	6.50	0.650	
			60			17.30	1.730	1600	0.35	5.50	0.550	
9CIDG5(L)~90F2P	90	3φ415	50	4	Cont.	20.50	2.050	1350	0.33	6.50	0.650	-
			60			16.20	1.620	1600	0.31	5.50	0.550	
		3φ440	50	4	Cont.	22.70	2.270	1350	0.36	6.50	0.650	
			60			18.10	1.810	1600	0.33	5.50	0.550	

1) Enter the phase & voltage code in the place \* within the motor model name.

2) The phase & voltage code A, D, E, G, K, L contain a built-in thermal protector.

3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

※ It is not possible to use an inverter for three phase 380~440V motor. When the inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60
			900	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30
9CIDG*~90F2P	9PBK□BH 9PFK□BH	kgfcm	8.9	13.4	16.0	22.3	26.7	33.4	40.1	44.6	50.2	60.2	72.3	80.3	90.8	108.9	130.7	145.2	181.5	200.0
		N.m	0.87	1.31	1.57	2.18	2.62	3.27	3.93	4.37	4.92	5.90	7.08	7.87	8.89	10.67	12.81	14.23	17.79	19.60

Motor Model	Gearbox Model	Gear Ratio r/min	75	90	100	120	150	180	200
			24	20	18	15	12	10	9
9CIDG*~90F2P	9PBK□BH 9PFK□BH	kgfcm	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	19.60	19.60	19.60	19.60	19.60	19.60	19.60

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60
			750	500	417	300	250	200	167	150	120	100	83	75	60	50	42	37.5	30	25
9CIDG*~90F2P	9PBK□BH 9PFK□BH	kgfcm	10.5	15.8	19.0	26.3	31.6	39.5	47.4	52.7	59.3	71.2	85.4	94.9	107.3	128.7	154.4	171.6	200.0	200.0
		N.m	1.03	1.55	1.86	2.58	3.10	3.87	4.64	5.16	5.81	6.98	8.37	9.30	10.51	12.61	15.14	16.82	19.60	19.60

Motor Model	Gearbox Model	Gear Ratio r/min	75	90	100	120	150	180	200
			20	17	15	12.5	10	8	7.5
9CIDG*~90F2P	9PBK□BH 9PFK□BH	kgfcm	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	19.60	19.60	19.60	19.60	19.60	19.60	19.60

1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.

3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the rotation in the opposite direction.

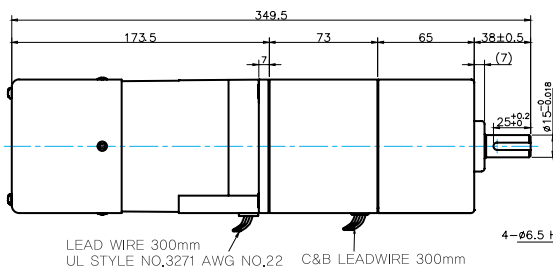
4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio. The actual speed is 2~20% less than the displayed value, depending on the size of the load.

## Dimensions

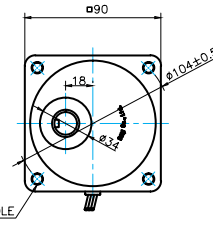
### GEARED MOTOR

#### P TYPE GEARBOX

● MOTOR MODEL:  
9CIDG□-90F2P



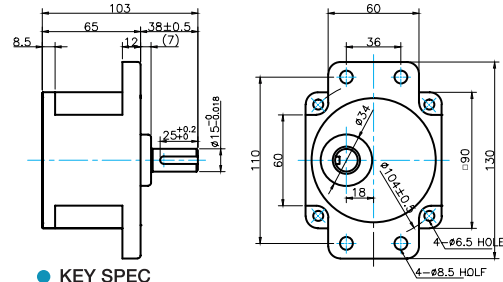
● GEARBOX MODEL:  
9PBK□BH



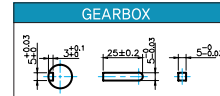
● GEARBOX OUTPUT SHAFT

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

● GEARBOX MODEL:  
9PFK□BH

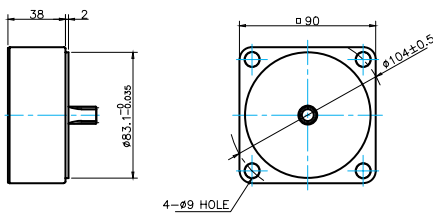


● KEY SPEC



#### INTER-DECIMAL GEARBOX

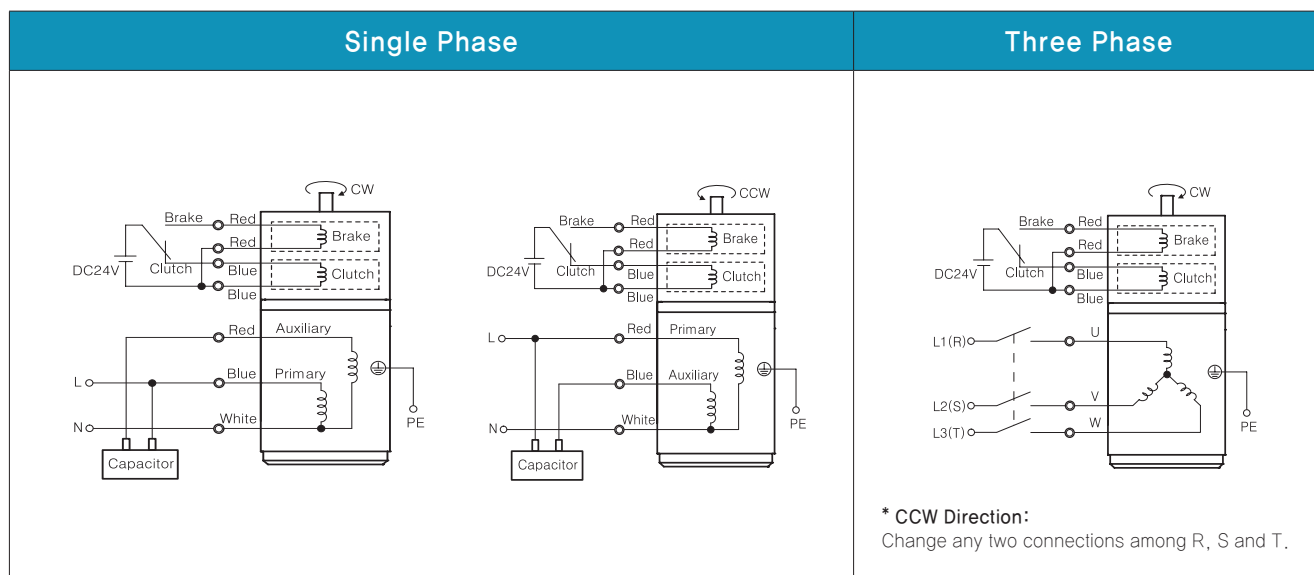
● MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4,4	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12.5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9XD10□□	0,6

## Connection Diagrams



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

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

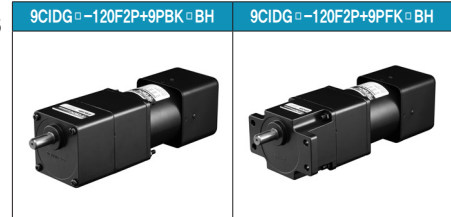
3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# B AC Motors

Clutch & Brake Motor 120W (□ 90mm)

## 120W Clutch & Brake Motor 120W(□ 90mm)

### Motor Images



### Motor Specification

Model 9IDG*-120F2P: Gear Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m		Rated Load			Capacitor μF / VAC	
								Speed r/min	Current A	Torque kgfcm N.m		
<b>Lead Wire Type</b>												
9CIDG1(A)-120F2P	120	1φ110	60	4	Cont.	6.50	0.650	1600	2.00	7.40	0.740	25.0 / 250
9CIDG2(D)-120F2P	120	1φ220	60	4	Cont.	6.20	0.620	1600	1.04	7.40	0.740	6.0 / 450
9CIDGE-120F2P	120	1φ220	50	4	Cont.	6.40	0.640	1250	0.90	9.40	0.940	6.0 / 450
		1φ240				7.50	0.750		1.00	9.40	0.940	
9CIDG3(G)-120F2P	120	3φ220	50	4	Cont.	24.40	2.440	1300	0.88	9.00	0.900	-
			60			20.00	2.000	1600	0.71	7.40	0.740	
		3φ230	50	4	Cont.	27.00	2.700	1350	0.86	8.70	0.870	
			60			21.70	2.170	1600	0.76	7.40	0.740	
9CIDG4(K)-120F2P	120	3φ380	50	4	Cont.	24.30	2.430	1300	0.50	9.00	0.900	-
			60			19.90	1.990	1600	0.41	7.40	0.740	
		3φ400	50	4	Cont.	27.10	2.710	1350	0.49	8.70	0.870	
			60			21.90	2.190	1600	0.43	7.40	0.740	
9CIDG5(L)-120F2P	120	3φ415	50	4	Cont.	24.30	2.430	1300	0.47	9.00	0.900	-
			60			19.90	1.990	1600	0.37	7.40	0.740	
		3φ440	50	4	Cont.	27.50	2.750	1350	0.47	8.70	0.870	
			60			22.20	2.220	1600	0.40	7.40	0.740	

1) Enter the phase & voltage code in the place \* within the motor model name.

2) The phase & voltage code A, D, E, G, K, L contain a built-in thermal protector.

3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

※ It is not possible to use an inverter for three phase 380~440V motor. When the inverter is used, the insulation of winding coil becomes hot and may cause damage to the motor.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60
			900	600	500	360	300	240	200	180	144	120	100	90	72	60	50	45	36	30
9IDG□ -120FP	9PBK□BH 9PFK□BH	kgfcm	12.0	18.0	21.6	30.0	36.0	45.0	53.9	59.9	67.5	81.0	97.2	108.0	122.1	146.5	175.8	195.4	200.0	200.0
		N.m	1.17	1.76	2.11	2.94	3.52	4.41	5.29	5.87	6.62	7.94	9.53	10.59	11.97	14.36	17.23	19.15	19.60	19.60

Motor Model	Gearbox Model	Gear Ratio r/min	75	90	100	120	150	180	200
			24	20	18	15	12	10	9
9IDG□ -120FP	9PBK□BH 9PFK□BH	kgfcm	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	19.60	19.60	19.60	19.60	19.60	19.60	19.60

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio r/min	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60
			750	500	417	300	250	200	167	150	120	100	83	75	60	50	42	37.5	30	25
9IDG□ -120FP	9PBK□BH 9PFK□BH	kgfcm	14.1	21.1	25.4	35.2	42.3	52.9	63.4	70.5	79.4	95.3	114.3	127.0	143.6	172.3	200.0	200.0	200.0	200.0
		N.m	1.38	2.07	2.49	3.45	4.14	5.18	6.22	6.91	7.78	9.34	11.20	12.45	14.07	16.88	19.60	19.60	19.60	19.60

Motor Model	Gearbox Model	Gear Ratio r/min	75	90	100	120	150	180	200
			20	17	15	12.5	10	8	7.5
9IDG□ -120FP	9PBK□BH 9PFK□BH	kgfcm	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	19.60	19.60	19.60	19.60	19.60	19.60	19.60

1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.

3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the rotation in the opposite direction.

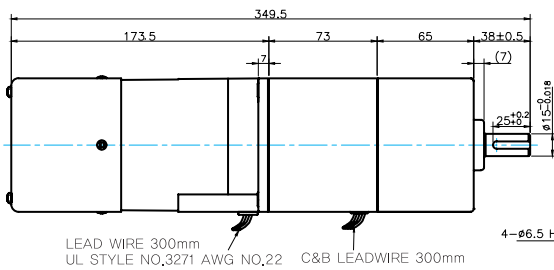
4) The rotating speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio. The actual speed is 2~20% less than the displayed value, depending on the size of the load.

## Dimensions

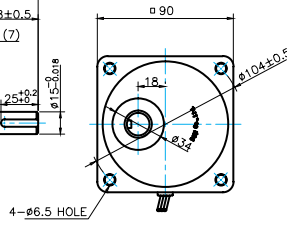
### GEARED MOTOR

#### P TYPE GEARBOX

● MOTOR MODEL:  
9CIDG□-120F2P



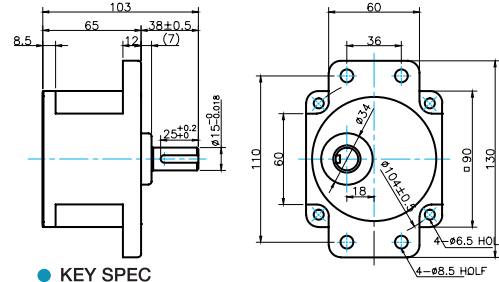
● GEARBOX MODEL:  
9PBK□BH



● GEARBOX OUTPUT SHAFT

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

● GEARBOX MODEL:  
9PFK□BH

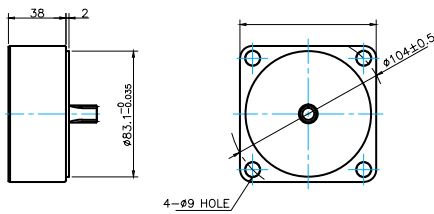


● KEY SPEC

GEARBOX	

#### INTER-DECIMAL GEARBOX

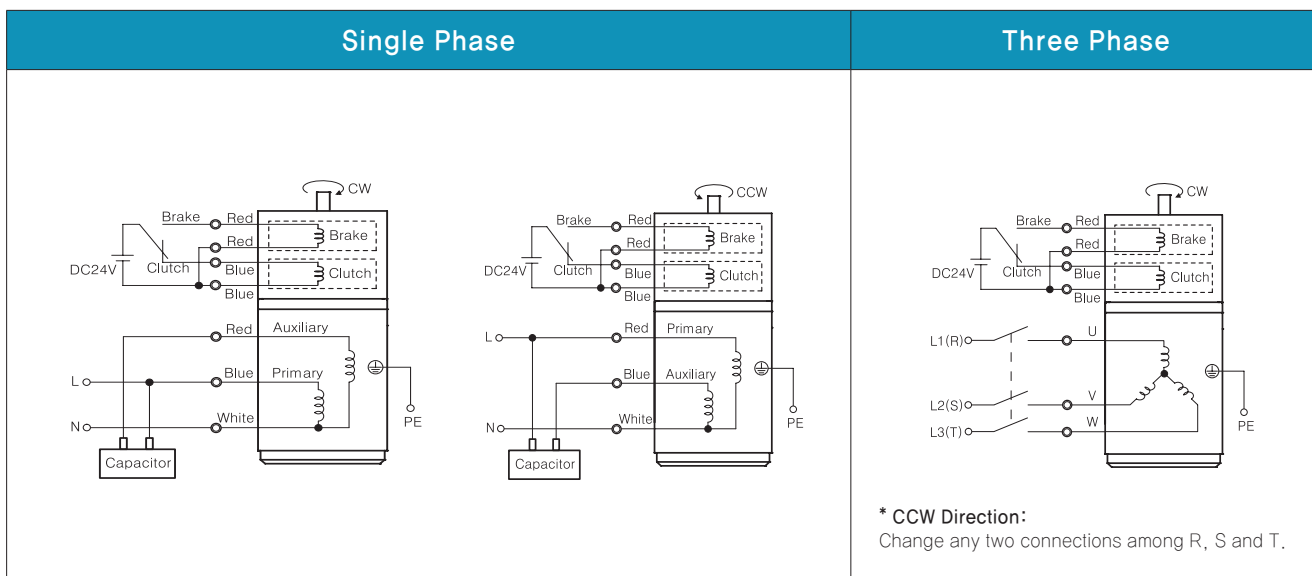
● MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4.4	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9XD10□□	0.6

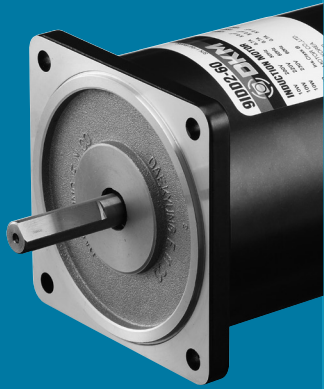
## Connection Diagrams



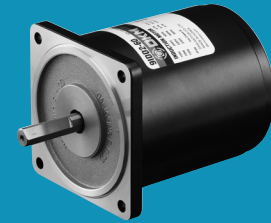
- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.







# Torque Motor



Torque Motor

## Index

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<b>Torque Motor 3W (□ 60mm)</b>	<b>B-189</b>
<b>Torque Motor 6W (□ 70mm)</b>	<b>B-191</b>
<b>Torque Motor 10W (□ 80mm)</b>	<b>B-193</b>
<b>Torque Motor 20W (□ 90mm)</b>	<b>B-195</b>
<b>Torque Motor 30W (□ 90mm)</b>	<b>B-197</b>
<b>Torque Motor 40W (□ 90mm)</b>	<b>B-200</b>
<b>Torque Motor 60W (□ 90mm)</b>	<b>B-203</b>

# B AC Motors

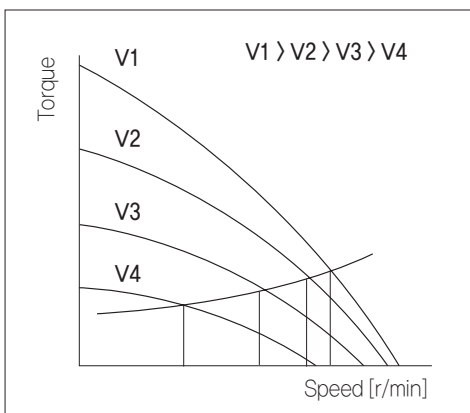
## Outline of Torque Motor

### Features

Torque motors are designed for providing high torque and sloping characteristics. (Torque is highest at zero speed and decreases steadily as speed increases.)

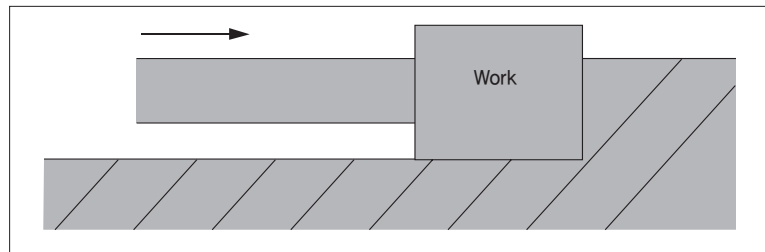
#### ● Various Speed over a Wide Range

The torque is approximately in proportion to the square of the voltage. Easy speed control is available by changing the voltage of the power supply.



#### ● Locked Operation

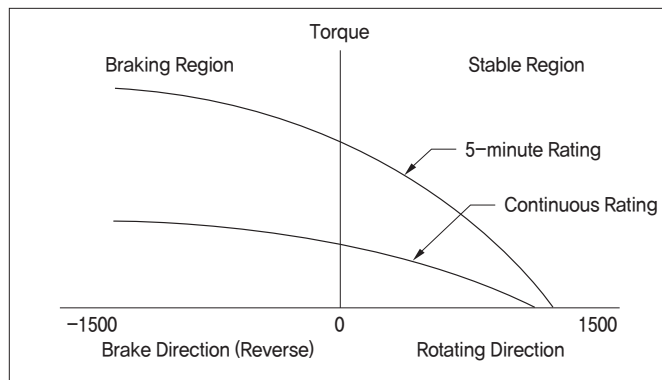
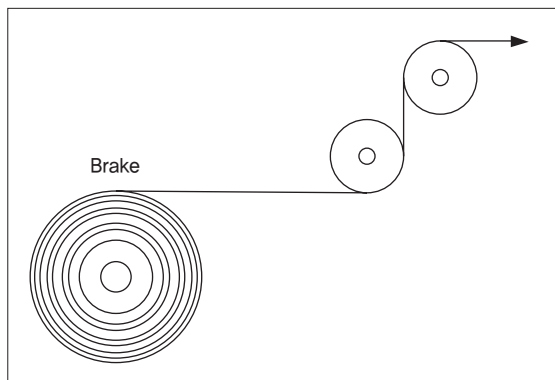
Torque motors are designed to provide stable torque even under stall conditions or at very low speeds (nearly stop). It is available only in torque motors not in induction or reversible motors. They are suitable for pushing applications that require static torque, or for loads that are usually under a locked rotor condition and are under stall conditions at the end of processes. At 60VAC or less the continuous operation is possible but when it is used at voltages above 60VAC, the motors are rated for limited duty. The motor has a about 5-minute rating at 115VAC or 220 VAC.



**\*Note :** When using a motor in locked rotor condition, the output torque becomes very large. The output torque of the gearbox must be lower than the maximum permissible torque. Also ensure that the load does not hit an object and stop, since this can cause damage to the gearbox due to the shock.

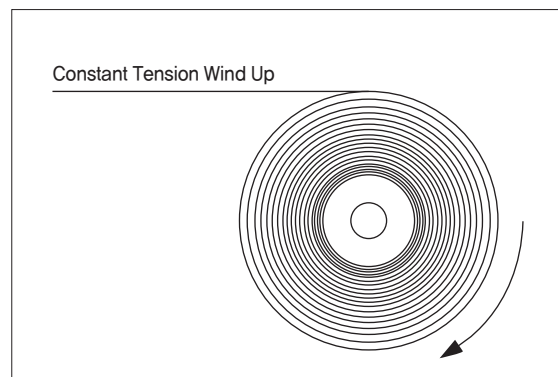
#### ● Use as a Brake

By using the motor in the braking region of the speed–torque characteristics, it can serve as a brake. Constant tension control can be achieved by applying a DC voltage.



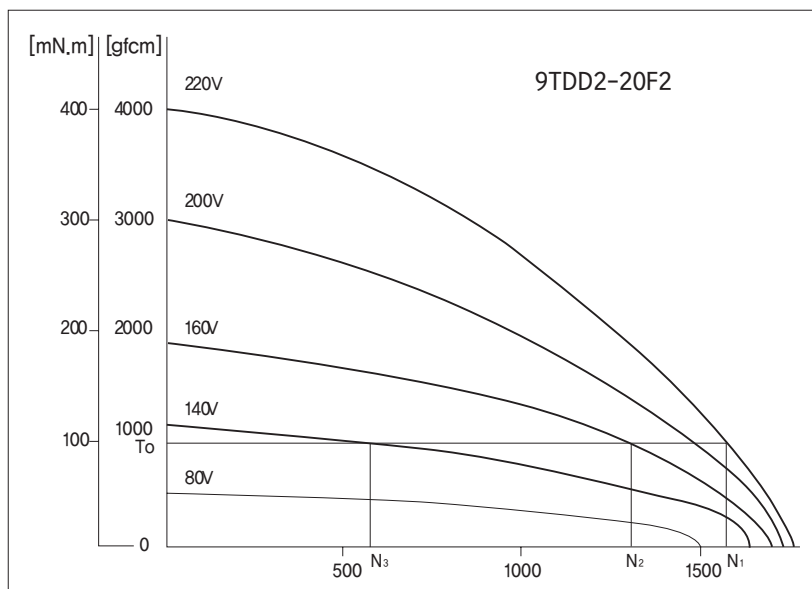
#### ● Suitable for Winding Applications

In an application where an object is released continuously at a constant speed and wound up with constant tension, the torque must be doubled and the speed must be halved if the diameter of the winding spool is doubled.



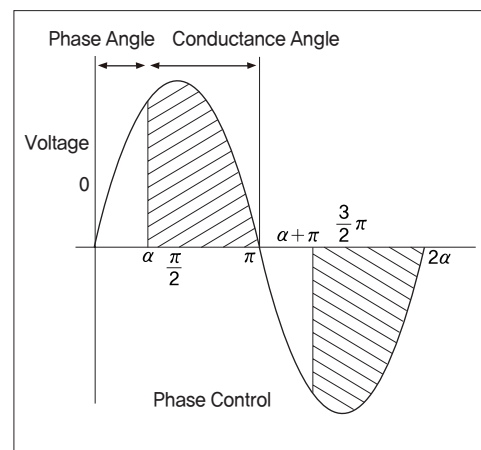
## Speed-Torque Characteristics

- The torque of torque motor is approximately in proportion to the square of the voltage. When the voltage supplied to the motor is changed, speed-torque curves with sloping characteristics (torque is highest at zero speed and decreases steadily as speed increases) will be corresponding voltage. If the voltage is changed to 115VAC, 80VAC and 60VAC while the load torque is  $T_0$ , the motor rotates at the speeds  $N_1$ ,  $N_2$  and  $N_3$  respectively. That is to say, the speed can be changed easily by varying the voltage. In choosing a torque motor, determine the required torque and speed first and then select a motor using the speed-torque characteristics curves to determine whether the motors should be operated under continuous duty or limited duty. In using motor under locked rotor conditions, only the torque factor is considered.



## Voltage Control of Torque Motor

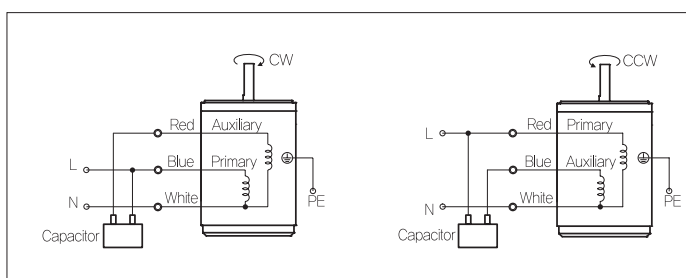
- As shown in the graph, as the phase angle “alpha” at which the triac switches changes, the input voltage is controlled as represented by the phase angle areas of the graph. When changing the speed or the torque, an external voltage controller is needed.



## General Specifications

Item	Specification
Insulation Resistance	100MΩ or more when DC500V MEGA is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5KV at 50Hz and 60Hz applied between the windings and the frame for 1 minute after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 80°C or less measured by the resistance change method after rated motor operation with connecting a gearbox or equivalent heat radiation plate.
Insulation Class	Class B [130°C]
Overheat Protection	Operating temperature (Built-in thermal protector type motor): Open 120°C±5°C, Close 90°C±5°C
Ambient Temperature	-10°C~+40°C (Three phase 220VAC: -10°C~+50°C)
Ambient Humidity	85% maximum

## Connection Diagrams



# B AC Motors

## Torque Controller FX3000

# FX3000

## Torque Controller

### Special Features

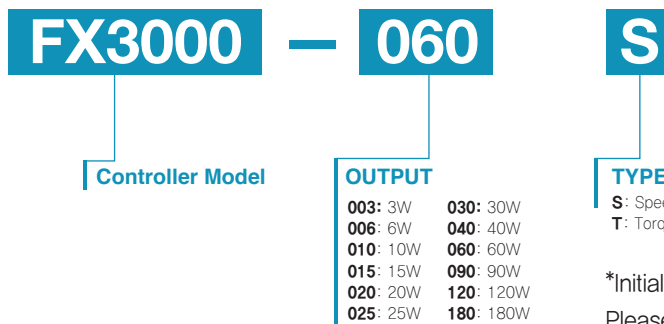
- **Easy, Simple Wiring**  
Possible to control the speed and torque of the motor simply by connecting a motor and control unit with connector and inputting the AC terminal to the power source.
- **Easy Wiring and Maintenance**  
The screwless connector is used for FX3000.
- **Efficient and Convenient Operation**  
Possible to control speed and torque easily with the front panel dial.
- **Digital Display**  
Display the current rotation speed(r/min) and torque(%).
- **Various Functions**  
Possible to operate various functions by setting the parameter.



### General Specifications

Model	FX3000-□□	
Rated Voltage	1∅ AC 220~240V 50/60Hz ±10 %	
Allowable Current	Below 6 A	
Control Function	Speed Control, Torque Control	
Control System	Phase Control	
Setting Range	Speed Control	50Hz : 90~1400r/min 60Hz : 90~1700r/min
	Torque Control	0 ~ 100 %
Speed Setting	Setting by Volume	
Speed Variation	±5%(Standard Value)	
Motor Output	3W~180W	
Ambient Temperature	-10C°~ 55C°	
Ambient Humidity	35 ~ 85%RH (Without condensation)	
Insulation Resistance	Over DC 500V 100MΩ (between power supply and external terminal)	
Dielectric Strength	AC 1500V 1minute (between power supply and external terminal)	

## CONTROLLER CODING SYSTEM

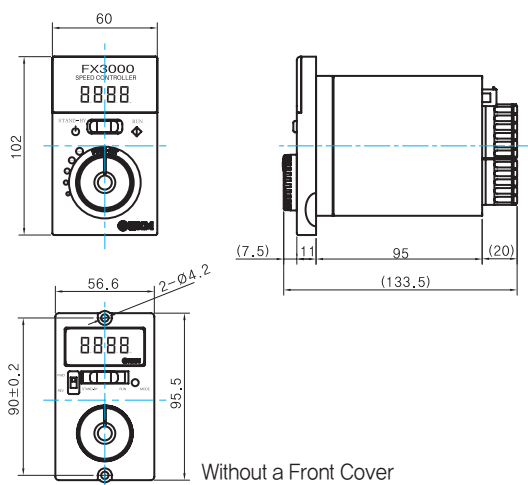


\*Initial setting mode is speed control.  
 Please change to '1' (torque motor) on parameter 'Pr04'(control mode), if using torque motor.  
 Regarding changing method, please refer to 'Parameter Setting Procedure'.

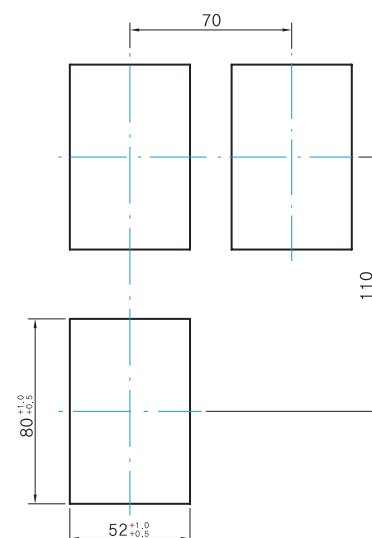
## Combination Table

Item	Output	Motor Model	Controller Model
TORQUE MOTOR	3W	6TD□□-3□	FX3000-003 T
	6W	7TD□□-6□	FX3000-006 T
	10W	8TD□□-10□	FX3000-010 T
	20W	9TD□□-20F2□	FX3000-020 T
	30W	9TD□□-30F2□	FX3000-030 T
	40W	9TD□□-40F2□	FX3000-040 T
	60W	9TD□□-60F2□	FX3000-060 T

## Dimensions



## Mounting Panel Dimension

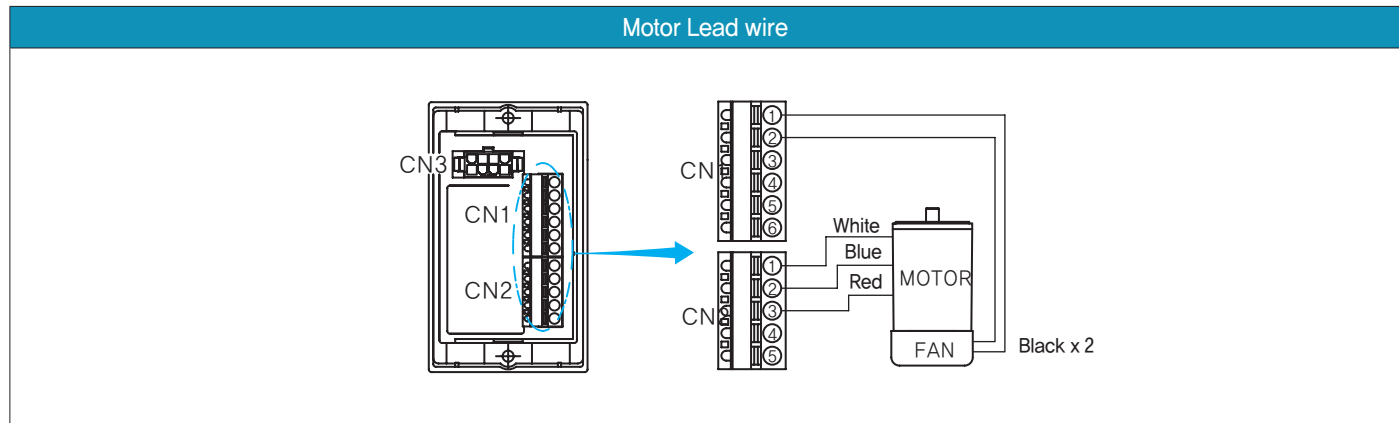


# B AC Motors

## Torque Controller FX3000

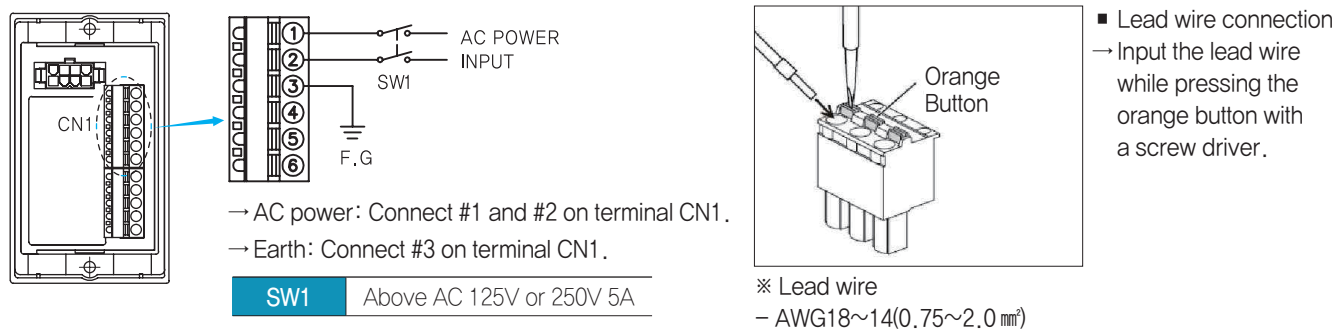
### Connection Diagram

#### Torque Control Motor Connection Diagram

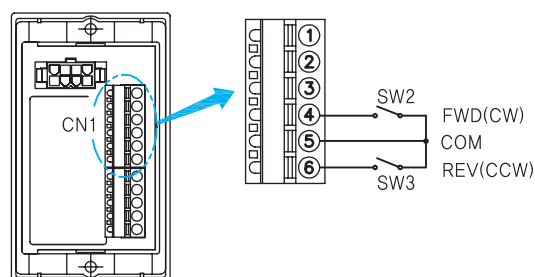


※ Depending on the motor type and specification, there can be no powerful fan cable (Black x2).

#### Controller Power Connection



#### Connection for Uni-directional operation



\* In case of RUN/ STOP operation externally, please make sure that the switch position should be on STAND-BY and connect #4, #5, and #6 on terminal CN1.

SW2	SW3	Motor Shaft
ON	OFF	Rotate to FWD
OFF	ON	Rotate to REV
OFF	OFF	STOP

※ Front switch should be at STAND-BY position when operating by external signal. (Connect only for external RUN/STOP)

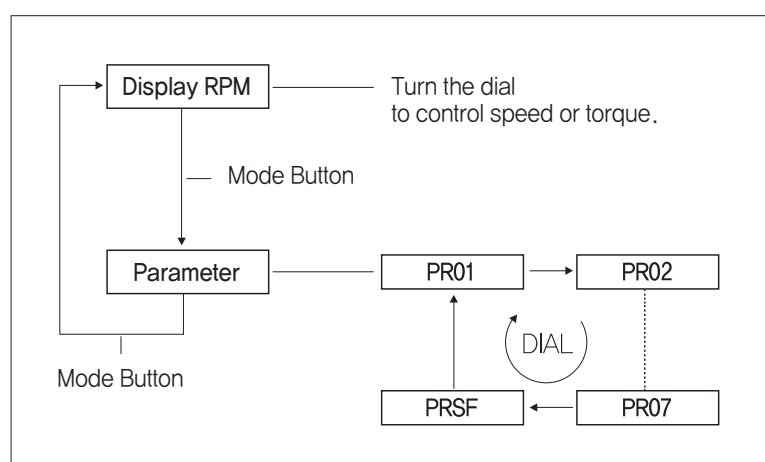
## Parameter Contents

Parameter		Function	Range	Standard Value	Remark
NO.	Display				
1	Pr01	Acceleration Time	0~15.0	0.1	Time(second) to reach the set speed
2	Pr02	Rotation Direction	0,1	0	0 : Clockwise 1 : Counterclockwise
3	Pr03	Gear Ratio	1~999	1.0	Input gear ratio
4	Pr04	Control Mode	0,1	0	0: Speed Control 1: Torque Control
5	Pr05	P Gain	0~255	100	
6	Pr06	I Gain	0~255	50	
7	Pr07	Parameter Reset	-	0	Reset when pressing and holding the SET button
SF	PrSF	Software Version	-	-	Display the software version

\* Speed Control P, I gain

- Parameter which determines responsibility of speed control.
- Vibration and hunting may occur if the value is too large.

## Product Formation



※ Press the dial(SET button) to enter the parameter data.

※ Press and hold the dial(SET button) to change the parameter data.



# B AC Motors

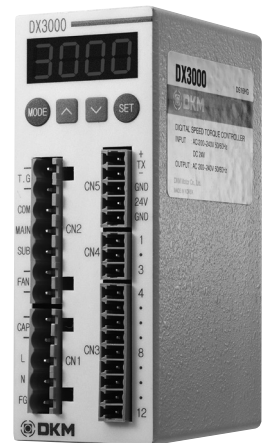
## Torque Controller DX3000

# DX3000

## Torque Controller

### Features

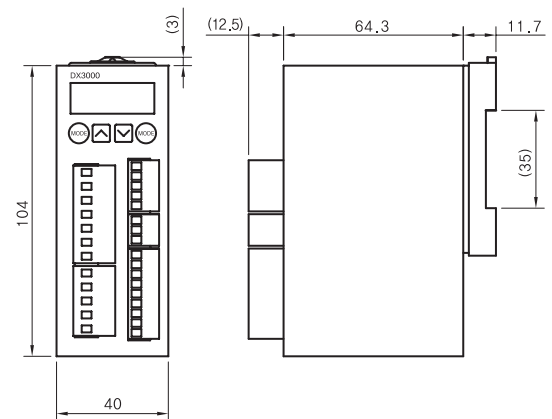
- **RS485 Communication**  
Possible to connect up to 255 devices with Modbus communication protocol.
- **PLC I/O Control**  
Control the system by PLC I/O (No Need Relay)
- **Easy Wiring and Maintenance**  
Easy installation and detachment with connector (Easy maintenance)  
Simple installation in DIN rail
- **Digital Display**  
Display the current rotation speed(r/min) and torque(%) on the screen.  
Possible to connect a external touch screen and adjust speed.
- **Various Parameter Function**  
Possible to operate various functions by setting the parameter.



### General Specifications

Model		DX3000	
General Specifications	Power Supply	Motor Power	AC 220~240V 50Hz / 60Hz ±10%
		Control Power	DC 24V ±10%
	Rated Current [A]	4	
	Max. Current [A]	6	
	Control Function	Speed Control, Torque Control	
	Control System	Phase-Duty Control	
	Dimension [mm]	40(W) × 104(H) × 65(D)	
	Speed Control Range	50Hz : 100 ~ 1460 r/min 60Hz : 100 ~ 1760 r/min	
	Torque Control Range	0 ~ 100% (Maximum Torque)	
	Feedback Sensor	Tacho - 12 ppr	
Ambient Temperature	-10 °C ~ 55 °C		
Input & Output specifications	Sequence Input	Forward, Reverse, Alarm reset, Velocity select	
	Sequence Output	Speed pulse out, Alarm out	
Built-in Functions	Protection Function	Parameter error, AC low voltage alarm, EEPROM	
	Condition Mark	4 Digit Display (7-Segment)	
Communication Mode		Serial Communication ( RS485 - MODBUS RTU )	

### Dimensions



## RS 485 Communication

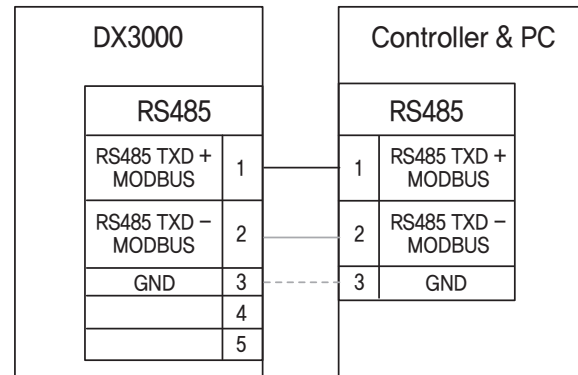
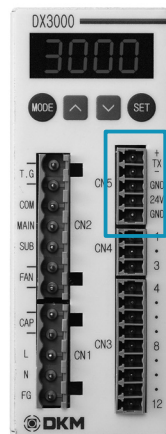
### Communication Mode

→ MODBUS RTU Slave Mode

### Register Support

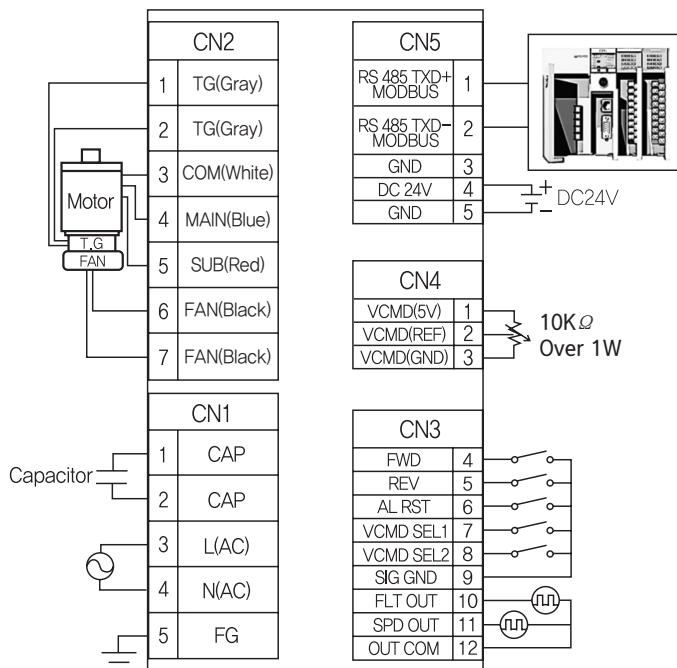
- 0x03 (Read Holding Registers)
- 0x04 (Read Input Registers)
- 0x06 (Write Single Registers)
- 0x03 (Read Holding Registers)

### Communication Connection Diagram



- When connecting the communication GND, please connect GND of Controller & PC to PIN No. 3 of CN5.
- Please visit our website to download communication manual.

## Controller Connection Diagram



## Function of CN3 Connector

NO.	Name	Description	Remark
4	FORWARD RUN	Forward operation switch	Input Signal
5	REVERSE RUN	Reverse operation switch	Input Signal
6	ALARM RESET	Alarm reset switch	Input Signal
7	SPEED SELECT1	Input select switch between internal and external input * Select operation mode with parameter No.7 * Internal Speed: Parameter No.30~No.32 * External Speed: External variable resistance	Input Signal
8	SPEED SELECT2	* Internal Torque: Parameter No.33~No.35 * External Torque: External variable resistance	
9	SIGNAL COMMON	Motor switch input COMMON	COMMON
10	FAULT OUT	Output controller status * Change output contact (A or B) according to parameter No.10	Output Signal
11	SPEED OUT	Motor operating speed output * 12 Pulse output per a rotation of the motor	Output Signal
9	OUT COMMON	Output Contact Common	COMMON

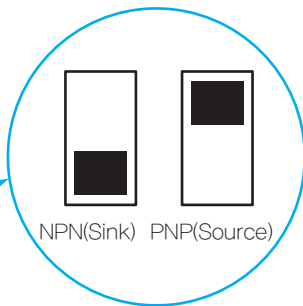
## Function of CN4 Connector

NO.	Name	Description	Remark
1	VCMD V	External speed command potentiometer + voltage output	5V Output
2	VCMD Vref	External speed directive value input	Voltage input
3	VCMD GND	Connect to external speed directive GND	V GND

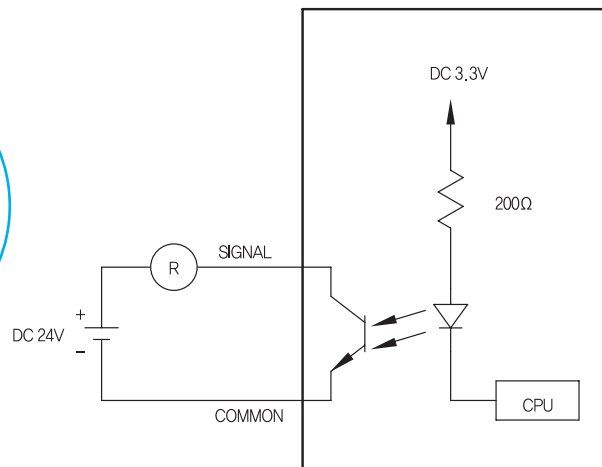
# B AC Motors

## Torque Controller DX3000

### I/O Signal Circuit

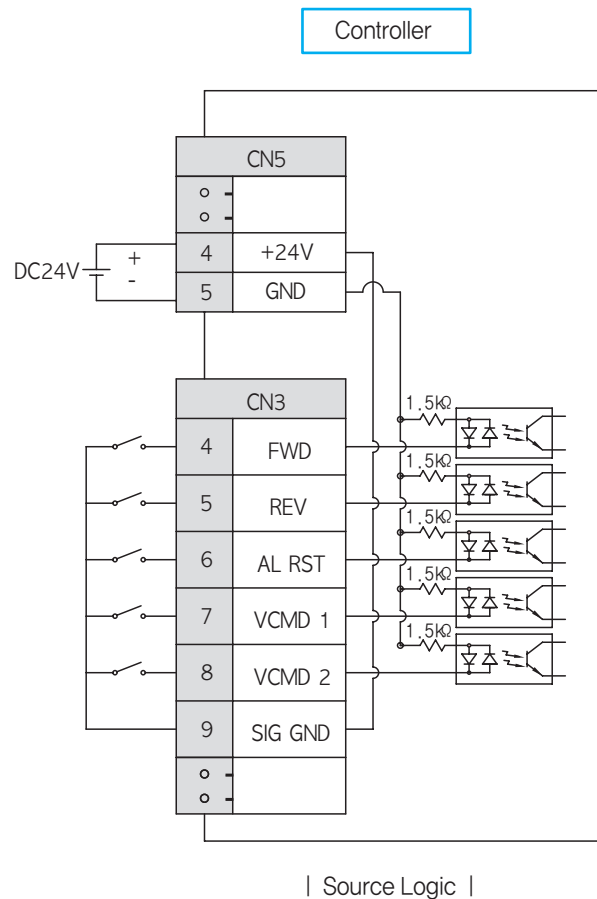
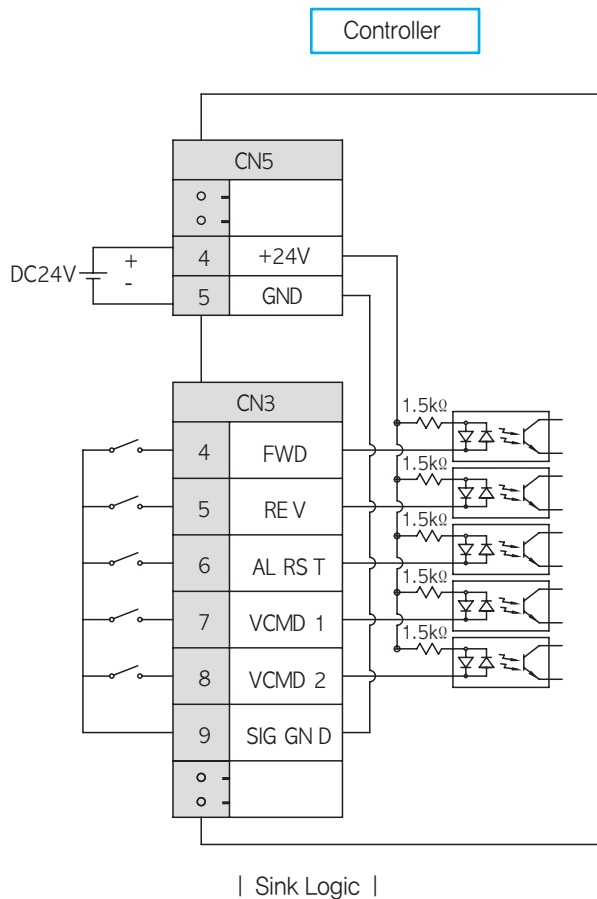


### Output Circuit



- Input COMMON(NPN, PNP) is set with the bottom switch of controller internal circuit board
- Initial Setting: NPN

### Input Circuit



## Parameter Contents

NO.	Function	Range	Standard value	Note
1	Max. Speed	1460/1760	–	r/min
3	Speed Limit	50~1760	1760	r/min
4	Acceleration Time	0~15.0	0.1	Second (S)
5	Rotation Direction	0~1	0	
6	Gear Ratio	1~250	1	0
7	Control Mode	0~1	0	0 : Speed Control 1 : Torque Control
8	Zero Clamp	0~0.5	0.0	Voltage (V)
9	Speed Command Offset	0~0.5	0	Voltage (V)
10	Abnormal Signal Output	0~1	0	
13	Speed Control P Gain	1~255	100	
14	Speed Control I Gain	1~255	50	
20	Communication ID Setting	1~254	1	
21	IO Input Setting	0~1	0	0 : CN310 Input 1 : RS485 Input
22	Speed Input Setting	0~1	0	0:CN4 Potentiometer Input 1:RS485 Speed Command input
23	RS485 Communication Speed Setting	0~4	1	0:2,400 bps 1:9,600 bps 2:19,200 bps 3:38,400 bps 4:115,200 bps
30	Internal Speed Setting 1	0~Max. Speed	500	r/min
31	Internal Speed Setting 2	0~Max. Speed	1000	r/min
32	Internal Speed Setting 3	0~Max. Speed	1500	r/min
33	Internal Torque Setting 1	0~100	10	%
34	Internal Torque Setting 2	0~100	20	%
35	Internal Torque Setting 3	0~100	50	%

### ■ Speed control P, I gain

- Parameter which determines responsibility of speed control
- Vibration and hunting occur if value is too large

# B AC Motors

Torque Motor 3W(□ 60mm)

## 3W Torque Motor 3W(□ 60mm)

### Motor Specification

Model 6TDG*-3G: Gear Type Shaft 6TDD*-3: D-Cut Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
6TDG1(A)-3G	5min.	1 ∅ 110	60	4	0.66	0.066	3	900	0.30	0.32	0.032	3.5 / 250
	Cont.	1 ∅ 60			0.26	0.026	1		0.22	0.11	0.011	
6TDG2(D)-3G	5min.	1 ∅ 220	60	4	0.72	0.072	3		0.17	0.32	0.032	
	Cont.	1 ∅ 140			0.27	0.027	1		0.13	0.11	0.011	
6TDGE-3G	5min.	1 ∅ 220~240	50	4	0.58	0.058	3	750	0.15	0.39	0.039	1.0 / 450
	Cont.	1 ∅ 140			0.22	0.022	1		0.10	0.13	0.013	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.
- 4) Impedance Protected Type

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

#### 60Hz

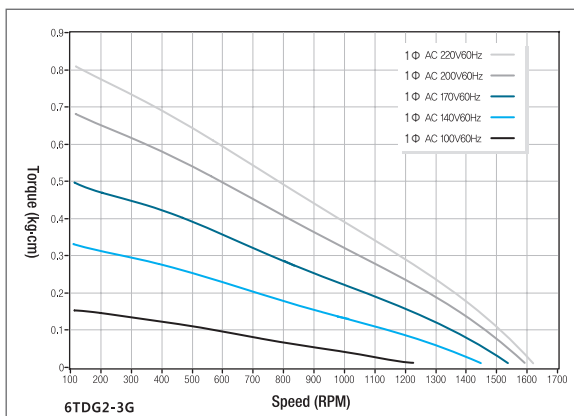
Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	
6TDG □-3G	6GBD □ MH	5min.	kgfcm 0.8	0.9	1.3	1.6	2.0	2.4	2.6	3.3	3.9	4.7	4.7	5.9	7.1	8.5	9.5	10.7	12.9	16.1	19.3	21.4	25.7	30.0	30.0	30.0	30.0	30.0
		N.m 0.08	0.09	0.13	0.15	0.19	0.23	0.26	0.32	0.39	0.46	0.46	0.58	0.70	0.84	0.93	1.05	1.26	1.57	1.89	2.10	2.52	2.94	3.00	2.94	2.94	2.94	2.94
		Cont.	kgfcm 0.3	0.3	0.4	0.5	0.7	0.8	0.9	1.1	1.3	1.6	1.6	2.0	2.4	2.8	3.2	3.6	4.3	5.4	6.4	7.1	8.6	10.7	12.9	14.3	17.9	
			N.m 0.03	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.13	0.15	0.15	0.19	0.23	0.28	0.31	0.35	0.42	0.52	0.63	0.70	0.84	1.05	1.26	1.40	1.75	

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250
6TDG*-3G	6GBD □ MH	5min.	kgfcm 0.9	1.1	1.6	1.9	2.4	2.8	3.2	3.9	4.7	5.7	5.7	7.1	8.5	10.2	11.4	12.9	15.4	19.3	23.1	25.7	30.0	30.0	30.0	30.0	30.0
		N.m 0.09	0.11	0.15	0.19	0.23	0.28	0.31	0.39	0.46	0.56	0.56	0.70	0.84	1.00	1.11	1.26	1.51	1.89	2.27	2.52	2.94	2.94	2.94	2.94	2.94	2.94
		Cont.	kgfcm 0.3	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.6	1.9	1.9	2.4	2.8	3.4	3.8	4.3	5.1	6.4	7.7	8.6	10.3	12.9	15.4	17.1	21.4
			N.m 0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.13	0.15	0.19	0.19	0.23	0.28	0.33	0.37	0.42	0.50	0.63	0.76	0.84	1.01	1.26	1.51	1.68	2.10

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

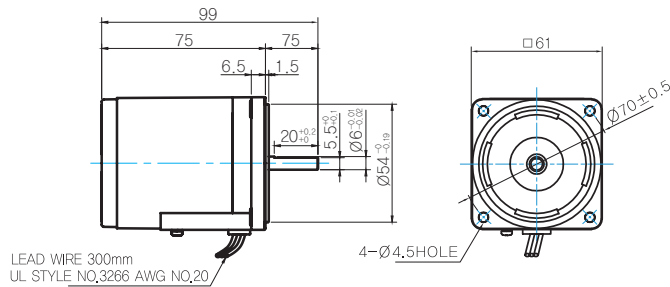
### Speed-Torque Characteristics



## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 6TDD□-3 (NO FAN)



- MOTOR OUTPUT SHAFT

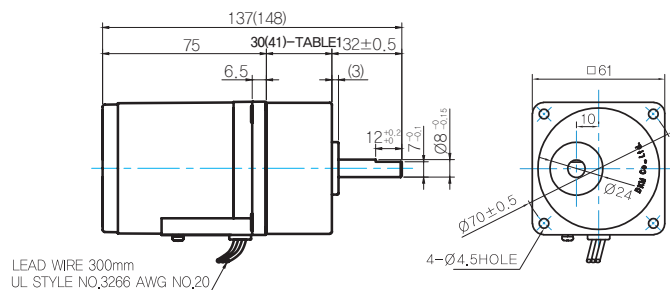
MODEL	SPEC
D-CUT TYPE	<p>24, 20, 18, 5.5, Ø6±0.02</p>

### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL: 6TDG□-3G (NO FAN)

- GEARBOX MODEL: 6GBD□MH



- GEARBOX OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	<p>32, 12, 18, 7.5, Ø8±0.02</p>

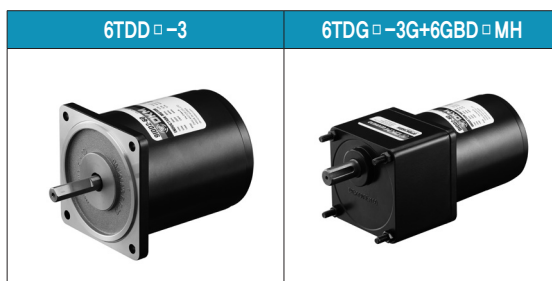
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	0.7
6GBD3MH ~ 6GBD18MH	0.3
6GBD20MH ~ 6GBD40MH	0.32
6GBD50MH ~ 6GBD250MH	0.34

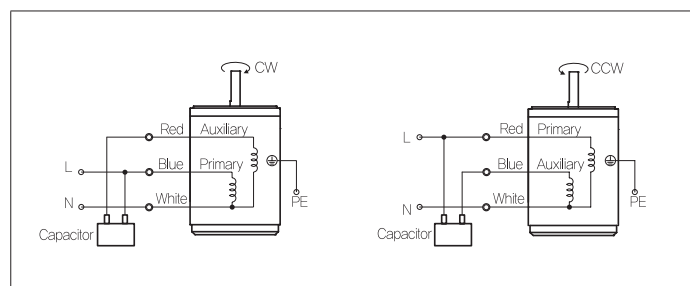
- 30(41)-Table1

SIZE(mm)	GEAR RATIO
30	6GBD3MH - 6GBD18MH
41	6GBD20MH - 6GBD250MH

## Motor Images



## Connection Diagrams



- 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.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# B AC Motors

Torque Motor 6W(□ 70mm)

**6W** Torque Motor  
6W(□ 70mm)

## Motor Specification

Model 7TDG*-6G: Gear Type Shaft 7TDD*-6: D-Cut Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
7TDG1(A)-6G	5min.	1 ∅ 110	60	4	0.96	0.096	6	900	0.51	0.65	0.065	6.0 / 250
	Cont.	1 ∅ 60			0.33	0.033	2		0.38	0.22	0.022	
7TDG2(D)-6G	5min.	1 ∅ 220	60	4	1.05	0.105	6		0.24	0.65	0.065	
	Cont.	1 ∅ 140			0.37	0.037	2		0.18	0.22	0.022	
7TDGE-6G	5min.	1 ∅ 220~240	50	4	0.91	0.091	6	750	0.22	0.78	0.078	1.5 / 450
	Cont.	1 ∅ 140			0.36	0.036	2		0.15	0.26	0.026	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Max. Permissible Torque at Output Shaft of Gearbox

### 60Hz

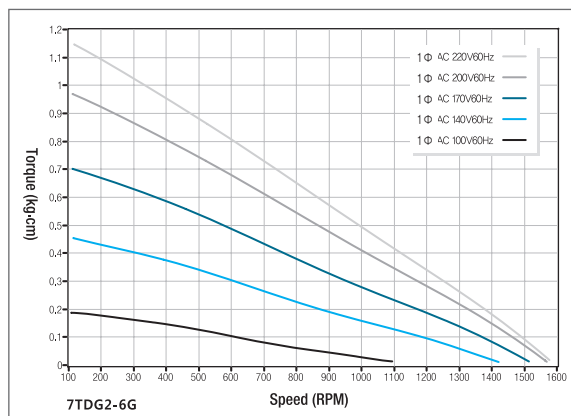
Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
7TDG*-6G	7GBK □ BMH	5min.	kgfcm	1.6	1.9	2.6	3.2	3.9	4.7	5.3	6.6	7.9	9.5	9.5	11.9	14.2	17.1	19.0	21.4	25.7	32.1	38.6	42.9	50.0	50.0	50.0	50.0
			N.m	0.15	0.19	0.26	0.31	0.39	0.46	0.52	0.64	0.77	0.93	0.93	1.16	1.39	1.67	1.86	2.10	2.52	3.15	3.78	4.20	4.90	4.90	4.90	4.90
		Cont.	kgfcm	0.5	0.6	0.9	1.1	1.3	1.6	1.8	2.2	2.6	3.2	3.2	4.0	4.7	5.7	6.3	7.1	8.6	10.7	12.9	14.3	17.1	21.4	25.7	28.6
			N.m	0.05	0.06	0.09	0.10	0.13	0.15	0.17	0.21	0.26	0.31	0.31	0.39	0.46	0.56	0.62	0.70	0.84	1.05	1.26	1.40	1.68	2.10	2.52	2.80

### 50Hz

Motor Model	Gearbox Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
7TDG*-6G	7GBK □ BMH	5min.	kgfcm	1.9	2.3	3.2	3.8	4.7	5.7	6.3	7.9	9.5	11.4	11.4	14.2	17.1	20.5	22.8	25.7	30.9	38.6	46.3	50.0	50.0	50.0	50.0	50.0
			N.m	0.186	0.22	0.31	0.37	0.46	0.56	0.62	0.77	0.93	1.11	1.11	1.39	1.67	2.01	2.23	2.52	3.02	3.78	4.54	4.90	4.90	4.90	4.90	4.90
		Cont.	kgfcm	0.6	0.8	1.1	1.3	1.6	1.9	2.1	2.6	3.2	3.8	3.8	4.7	5.7	6.8	7.6	8.6	10.3	12.9	15.4	17.1	20.6	25.7	30.9	34.3
			N.m	0.062	0.07	0.10	0.12	0.15	0.19	0.21	0.26	0.31	0.37	0.37	0.46	0.56	0.67	0.74	0.84	1.01	1.26	1.51	1.68	2.02	2.52	3.02	3.36

- 1) Enter the phase & voltage code in the place \* within the motor model name, 2) Enter the gear ratio in the box (□) within the gearbox model name.
  - 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

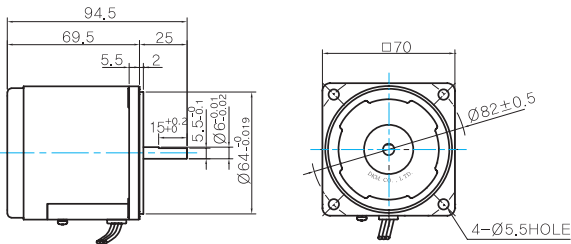
## Speed-Torque Characteristics



## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 7TDD□-6 (NO FAN)



LEAD WIRE 300mm  
UL STYLE NO.3266 AWG NO.20

### MOTOR OUTPUT SHAFT

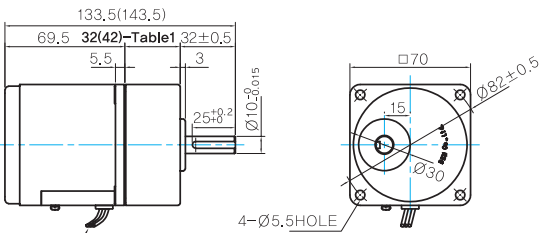
MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL: 7TDG□-6G (NO FAN)

- GEARBOX MODEL: 7GBK□BMH



LEAD WIRE 300mm  
UL STYLE NO.3266 AWG NO.20

### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

GEARBOX	
4.40±0.03	2.5 <sup>+0.1</sup> / <sub>0</sub>
25±0.5	4 <sup>+0.03</sup> / <sub>0</sub>

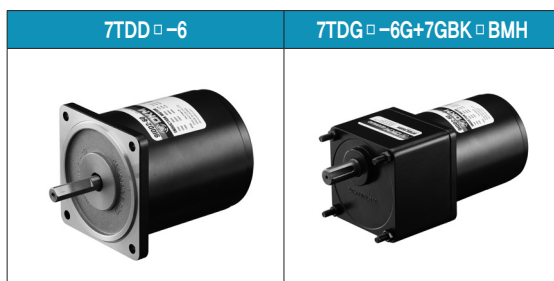
### WEIGHT

PART		WEIGHT(Kg)
MOTOR		0,8
GEAR BOX	7GBK3BMH - 7GBK18BMH	0,38
	7GBK20BMH - 7GBK40BMH	0,48
	7GBK50BMH - 7GBK200BMH	0,53

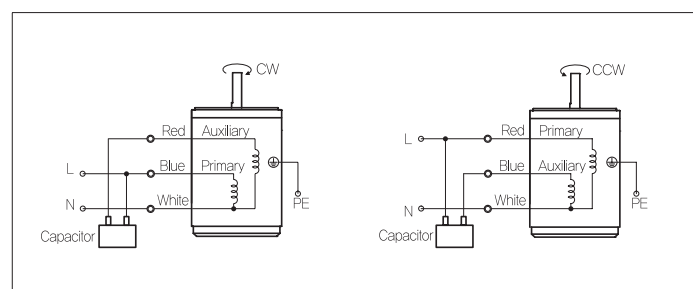
### 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

## Motor Images



## Connection Diagrams



- 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.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.



# B AC Motors

Torque Motor 10W(□ 80mm)

## 10W Torque Motor 10W(□ 80mm)

### Motor Specification

Model 8TDG*-10G: Gear Type Shaft 8TDD*-10: D-Cut Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
8TDG1(A)-10G	5min.	1 ∅ 110	60	4	2.65	0.265	10	900	0.82	1.08	0.108	10.0 / 250
	Cont.	1 ∅ 60			0.72	0.072	3		0.53	0.32	0.032	
8TDG2(D)-10G	5min.	1 ∅ 220	60	4	2.12	0.212	10		0.32	1.08	0.108	
	Cont.	1 ∅ 140			0.80	0.080	3		0.23	0.32	0.032	
8TDGE-10G	5min.	1 ∅ 220~240	50	4	1.94	0.194	10	750	0.28	1.30	0.130	2.5 / 450
	Cont.	1 ∅ 140			0.78	0.078	3		0.18	0.39	0.039	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

#### 60Hz

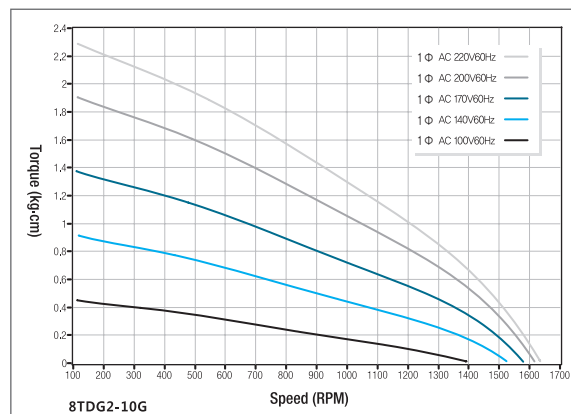
Motor Model	Gearbox Model	Gear Ratio	Torque (kgfcm)																											
			3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	360	
8TDG □-10G	8GBK □ BMH	5min.	2.6	3.2	4.4	5.3	6.6	7.9	8.8	11.0	13.1	15.8	15.8	19.8	23.7	28.4	31.6	35.7	42.9	53.6	64.3	71.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		Cont.	0.8	0.9	1.3	1.6	2.0	2.4	2.6	3.3	3.9	4.7	4.7	5.9	7.1	8.5	9.5	10.7	12.9	16.1	19.3	21.4	25.7	32.1	38.6	42.9	53.6	64.3	77.1	
			0.08	0.09	0.13	0.15	0.19	0.23	0.26	0.32	0.39	0.46	0.46	0.58	0.70	0.84	0.93	1.05	1.26	1.57	1.89	2.10	2.52	3.15	3.78	4.20	5.25	6.30	7.56	

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	Torque (kgfcm)																											
			3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	360	
8TDG*- 10G	8GBK □ BMH	5min.	3.2	3.8	5.3	6.3	7.9	9.5	10.5	13.1	15.8	18.9	19.0	23.7	28.4	34.1	37.9	42.9	51.4	64.3	77.1	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	
		Cont.	0.9	1.1	1.6	1.9	2.4	2.8	3.2	3.9	4.7	5.7	5.7	7.1	8.5	10.2	11.4	12.9	15.4	19.3	23.1	25.7	30.9	38.6	46.3	51.4	64.3	77.1	80.0	
			0.09	0.11	0.15	0.19	0.23	0.28	0.31	0.39	0.46	0.56	0.56	0.70	0.84	1.00	1.11	1.26	1.51	1.89	2.27	2.52	3.02	3.78	4.54	5.04	6.30	7.56	7.84	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
  - 2) Enter the gear ratio in the box (□) within the gearbox model name.
  - 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

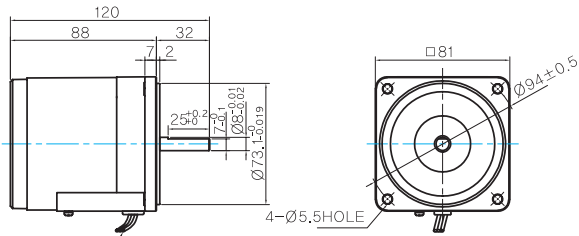
### Speed-Torque Characteristics



## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 8TDD□-10 (NO FAN)



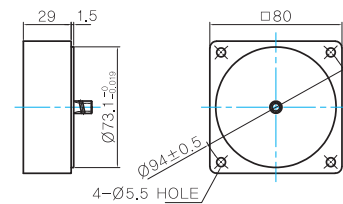
LEAD WIRE 300mm  
UL STYLE NO.3271 AWG NO.20

### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### INTER-DECIMAL GEARBOX

- MODEL: 8XD10□□

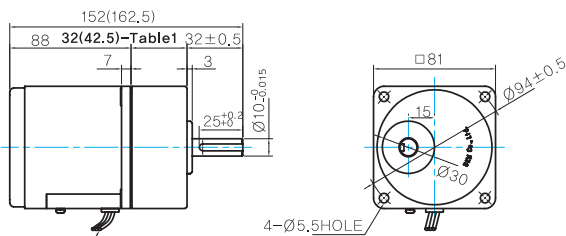


## GEARED MOTOR

### G TYPE GEARBOX

- MOTOR MODEL: 8TDG□-10G (NO FAN)

- GEARBOX MODEL: 8GBK□BMH

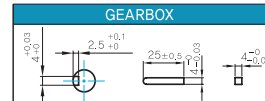


LEAD WIRE 300mm  
UL STYLE NO.3271 AWG NO.20

### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC



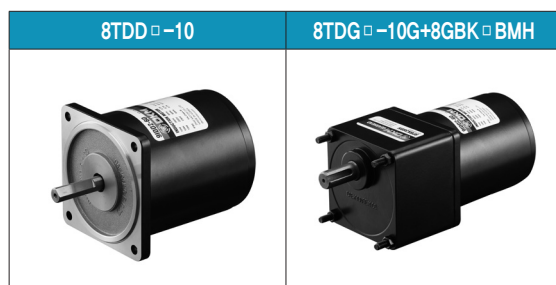
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	1.56
8GBK3BMH - 8GBK18BMH	0.56
8GBK20BMH - 8GBK40BMH	0.65
8GBK50BMH - 8GBK360BMH	0.72
8XD10□□	0.45

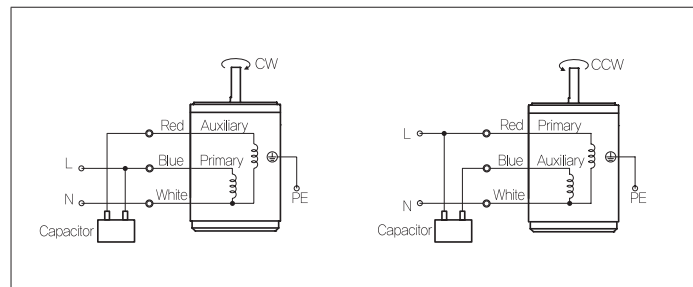
### 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

## Motor Images



## Connection Diagrams



- 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.
- Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# B AC Motors

Torque Motor 20W(□ 90mm)

## 20W Torque Motor 20W(□ 90mm)

### Motor Images



### Motor Specification

Model 9TDG*-20F2□: Gear Type Shaft 9TDD*-20F2: D-Cut Type Shaft 9TDK*-20F2: Key Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
9TDG1(A)-20F2□	5min.	1 ∅ 110	60	4	4.55	0.455	20	900	1.40	2.16	0.216	16.0 / 250
	Cont.	1 ∅ 60			1.25	0.125	7		0.79	0.76	0.076	
9TDG2(D)-20F2□	5min.	1 ∅ 220	60	4	4.88	0.488	20	900	0.63	2.16	0.216	4.0 / 450
	Cont.	1 ∅ 140			2.09	0.209	7		0.45	0.76	0.076	
9TDGE-20F2□	5min.	1 ∅ 220~240	50	4	4.49	0.449	20	750	0.55	2.60	0.260	4.0 / 450
	Cont.	1 ∅ 140			1.83	0.183	7		0.36	0.91	0.091	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
9TDG*-20F2G	9GBK□BMH	5min.	kgfcm	3.5	5.3	6.3	8.8	10.5	13.1	15.8	17.5	21.9	26.3	31.6	31.6	39.5	47.4	56.9	63.2	71.4	85.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.34	0.52	0.62	0.86	1.03	1.29	1.55	1.72	2.15	2.58	3.09	3.10	3.87	4.65	5.57	6.19	7.00	8.40	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80
		Cont.	kgfcm	1.2	1.8	2.2	3.1	3.7	4.6	5.5	6.1	7.7	9.2	11.0	11.1	13.8	16.6	19.9	22.1	25.0	30.0	37.5	45.0	50.0	60.0	75.0	90.0	100.0	
		N.m	0.12	0.18	0.22	0.30	0.36	0.45	0.54	0.60	0.75	0.90	1.08	1.08	1.35	1.63	1.95	2.17	2.45	2.94	3.67	4.41	4.90	5.88	7.35	8.82	9.80		

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-20F2P	9PBK□BH 9PFK□BH	5min.	kgfcm	3.5	5.2	6.3	8.7	10.5	13.1	15.7	17.5	19.7	23.7	28.4	31.5	35.6	42.8	51.3	57.0	71.3	85.5	95.6	114.7	127.4	152.9	191.2	200.0	200.0
		N.m	0.34	0.51	0.62	0.86	1.03	1.29	1.54	1.71	1.93	2.32	2.78	3.09	3.49	4.19	5.03	5.59	6.99	8.38	9.37	11.24	12.49	14.99	18.73	19.60	19.60	
		Cont.	kgfcm	1.2	1.8	2.2	3.1	3.7	4.6	5.5	6.2	6.9	8.3	10.0	11.1	12.5	15.0	18.1	20.1	25.1	30.1	33.6	40.4	44.8	53.8	67.3	80.7	89.7
		N.m	0.12	0.18	0.22	0.30	0.36	0.45	0.54	0.60	0.68	0.82	0.98	1.09	1.23	1.47	1.77	1.97	2.46	2.95	3.30	3.95	4.39	5.27	6.59	7.91	8.79	

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-20F2G	9GBK□BMH	5min.	kgfcm	4.2	6.3	7.6	10.5	12.6	15.8	18.9	21.0	26.3	31.6	37.9	37.9	47.4	56.9	68.3	75.8	85.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.41	0.62	0.74	1.03	1.24	1.55	1.86	2.06	2.58	3.09	3.71	3.72	4.65	5.57	6.69	7.43	8.40	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80
		Cont.	kgfcm	1.5	2.2	2.7	3.7	4.4	5.5	6.6	7.4	9.2	11.0	13.3	13.3	16.6	19.9	23.9	26.5	30.0	36.0	45.0	54.0	60.0	72.0	90.0	100.0	100.0
		N.m	0.14	0.22	0.26	0.36	0.43	0.54	0.65	0.72	0.90	1.08	1.30	1.30	1.63	1.95	2.34	2.60	2.94	3.53	4.41	5.29	5.88	7.06	8.82	9.80	9.80	

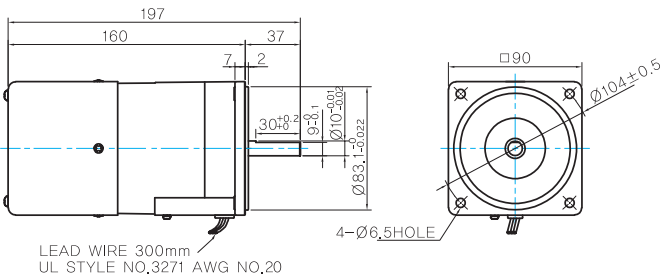
Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-20F2P	9PBK□BH 9PFK□BH	5min.	kgfcm	4.2	6.3	7.6	10.5	12.6	15.8	19.0	21.1	23.7	28.5	34.2	38.0	42.9	51.5	61.8	68.6	85.8	103.0	115.1	138.1	153.4	184.1	200.0	200.0	200.0
		N.m	0.41	0.62	0.74	1.03	1.24	1.55	1.86	2.06	2.33	2.79	3.35	3.72	4.20	5.05	6.05	6.73	8.41	10.09	11.27	13.53	15.03	18.04	19.60	19.60	19.60	
		Cont.	kgfcm	1.5	2.2	2.7	3.7	4.4	5.5	6.6	7.4	8.3	10.0	12.0	13.3	15.0	18.0	21.6	24.0	30.0	36.0	40.3	48.3	53.7	64.4	80.5	96.6	107.4
		N.m	0.14	0.22	0.26	0.36	0.43	0.54	0.65	0.72	0.81	0.98	1.17	1.30	1.47	1.77	2.12	2.35	2.94	3.53	3.95	4.74	5.26	6.31	7.89	9.47	10.52	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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: 9TDD□-20F2 (POWERFUL FAN)

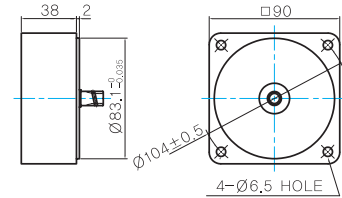


### MOTOR OUTPUT SHAFT

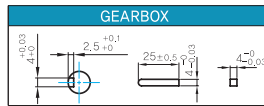
MODEL	SPEC
D-CUT TYPE	37 30±0.2 9±0.1 Ø10±0.01
9TDD□-20F2	
KEY TYPE	37 25±0.2 Ø10±0.01
9TDK□-20F2	

### INTER-DECIMAL GEARBOX

MODEL: 9XD10□□



### KEY SPEC



### WEIGHT

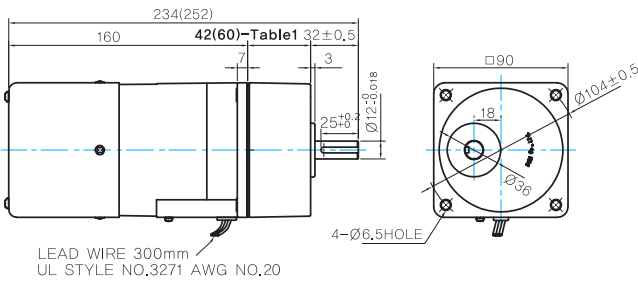
PART	WEIGHT(Kg)
MOTOR	3.05
9GBK2BMH ~ 9GBK15BMH	0.78
9GBK20BMH ~ 9GBK40BMH	1.1
9GBK50BMH ~ 9GBK200BMH	1.2
9PB(F)K2BH ~ 9PB(F)K10BH	1.28
9PB(F)K12.5BH ~ 9PB(F)K20BH	1.3
9PB(F)K25BH ~ 9PB(F)K60BH	1.45
9PB(F)K75BH ~ 9PB(F)K200BH	1.47
9XD10□□	0.6

## GEARED MOTOR

### G TYPE GEARBOX

MOTOR MODEL:  
9TDG□-20F2G (POWERFUL FAN)

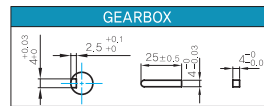
GEARBOX MODEL:  
9GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	32 25±0.2 Ø12±0.018

### KEY SPEC



### 42(60)-Table1

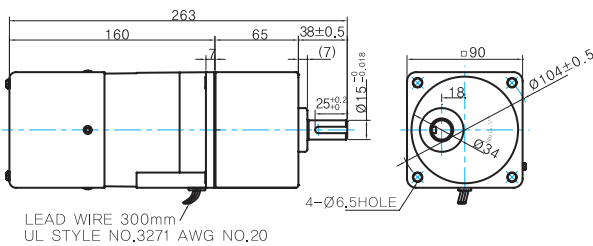
SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK18BMH
60	9GBK20BMH - 9GBK200BMH

### P TYPE GEARBOX

MOTOR MODEL:  
9TDG□-20F2P (POWERFUL FAN)

GEARBOX MODEL:  
9PBK□BH

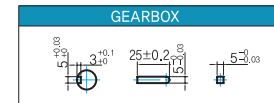
GEARBOX MODEL:  
9PFK□BH



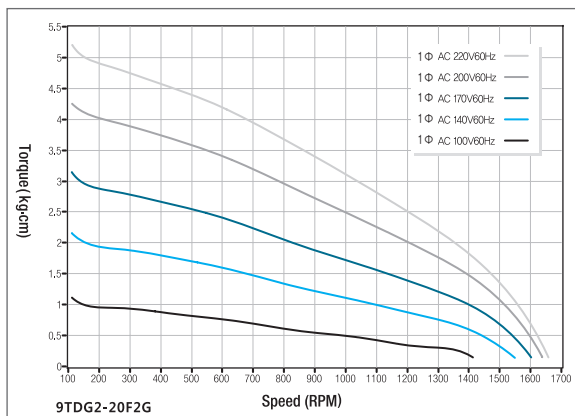
### GEARBOX OUTPUT SHAFT

KEY TYPE	SPEC
9PBK□BH 9PFK□BH	38 25±0.2 Ø15±0.018

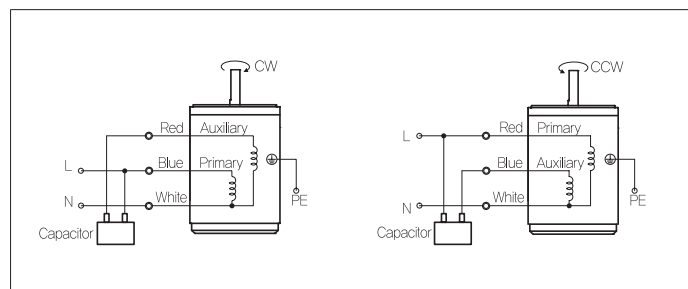
### KEY SPEC



## Speed-Torque Characteristics



## Connection Diagrams



- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# B AC Motors

Torque Motor 30W(□ 90mm)

## 30W Torque Motor 30W(□ 90mm)

### Motor Specification

Model 9TDG*-30F2□: Gear Type Shaft 9TDD*-30F2: D-Cut Type Shaft 9TDK*-30F2: Key Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
9TDG1(A)-30F2□	5min.	1 ∅ 110	60	4	6.07	0.607	30	900	1.54	3.25	0.325	20.0 / 250
	Cont.	1 ∅ 60			1.86	0.186	10		0.92	1.08	0.108	
9TDG2(D)-30F2□	5min.	1 ∅ 220	60	4	5.97	0.597	30		0.75	3.25	0.325	5.0 / 450
	Cont.	1 ∅ 140			2.49	0.249	10		0.51	1.08	0.108	
9TDGE-30F2□	5min.	1 ∅ 220~240	50	4	5.89	0.589	30	750	0.63	3.90	0.390	5.0 / 450
	Cont.	1 ∅ 140			2.57	0.257	10		0.43	1.30	0.130	

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) The phase & voltage code A, D, E contain a built-in thermal protector.

3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

#### 60Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-30F2P	9PBK □ BH 9PFK □ BH	5min.	kgfcm	5.3	7.9	9.5	13.1	15.8	19.7	23.7	26.3	29.6	35.6	42.7	47.4	53.6	64.3	77.1	85.7	107.1	128.6	143.7	172.4	191.6	200.0	200.0	200.0	200.0
		N.m	0.52	0.77	0.93	1.29	1.55	1.93	2.32	2.58	2.90	3.48	4.18	4.65	5.25	6.30	7.56	8.40	10.50	12.60	14.08	16.90	18.77	19.60	19.60	19.60	19.60	
9TDG*-30F2H	9HBK □ BH 9HFK □ BH	5min.	kgfcm	-	7.9	9.5	13.1	15.8	19.7	23.7	26.3	29.6	35.6	42.7	47.4	53.6	64.3	77.1	85.7	107.1	128.6	143.7	172.4	191.6	229.9	287.3	300.0	300.0
		N.m	-	0.77	0.93	1.29	1.55	1.93	2.32	2.58	2.90	3.48	4.18	4.65	5.25	6.30	7.56	8.40	10.50	12.60	14.08	16.90	18.77	22.53	28.16	29.40	29.40	
		Cont.	kgfcm	1.8	2.6	3.2	4.4	5.3	6.6	7.9	8.8	9.9	11.9	14.2	15.8	17.9	21.4	25.7	28.6	35.7	42.9	47.9	57.5	63.9	76.6	95.8	114.9	127.7
			N.m	0.17	0.26	0.31	0.43	0.52	0.64	0.77	0.86	0.97	1.16	1.39	1.55	1.75	2.10	2.52	2.80	3.50	4.20	4.69	5.63	6.26	7.51	9.39	11.26	12.51

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-30F2P	9PBK □ BH 9PFK □ BH	5min.	kgfcm	6.3	9.5	11.4	15.8	18.9	23.7	28.4	31.6	35.6	42.7	51.2	56.9	64.3	77.1	92.6	102.9	128.6	154.3	172.4	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	0.62	0.93	1.11	1.55	1.86	2.32	2.78	3.09	3.48	4.18	5.02	5.57	6.30	7.56	9.07	10.08	12.60	15.12	16.90	19.60	19.60	19.60	19.60	19.60	19.60	
9TDG*-30F2H	9HBK □ BH 9HFK □ BH	5min.	kgfcm	-	9.5	11.4	15.8	18.9	23.7	28.4	31.6	35.6	42.7	51.2	56.9	64.3	77.1	92.6	102.9	128.6	154.3	172.4	206.9	229.9	275.8	300.0	300.0	300.0
		N.m	-	0.93	1.11	1.55	1.86	2.32	2.78	3.09	3.48	4.18	5.02	5.57	6.30	7.56	9.07	10.08	12.60	15.12	16.90	20.27	22.53	27.03	29.40	29.40	29.40	
		Cont.	kgfcm	2.1	3.2	3.8	5.3	6.3	7.9	9.5	10.5	11.9	14.2	17.1	19.0	21.4	25.7	30.9	34.3	42.9	51.4	57.5	69.0	76.6	91.9	114.9	137.9	153.2
			N.m	0.21	0.31	0.37	0.52	0.62	0.77	0.93	1.03	1.16	1.39	1.67	1.86	2.10	2.52	3.02	3.36	4.20	5.04	5.63	6.76	7.51	9.01	11.26	13.52	15.02

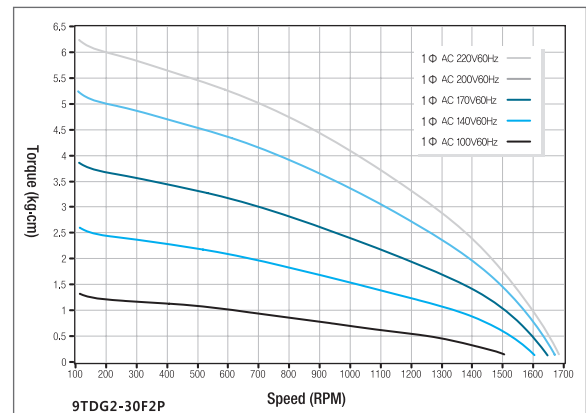
1) Enter the phase & voltage code in the place \* within the motor model name.

2) Enter the gear ratio in the box (□) within the gearbox model name.

3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

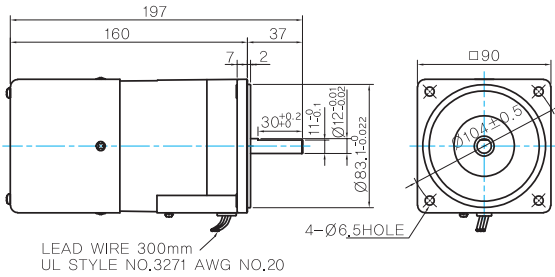
### Speed-Torque Characteristics



## Dimensions

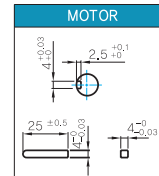
### MOTOR ONLY

- MOTOR MODEL:  
9TDD□-30F2 (POWERFUL FAN)



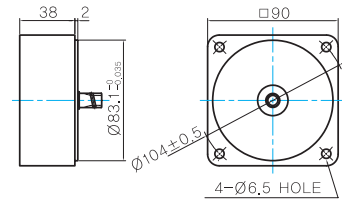
- MOTOR OUTPUT SHAFT
- KEY SPEC

MODEL	SPEC
D-CUT TYPE	
9TDD□-30F2	
KEY TYPE	
9TDK□-30F2	



### INTER-DECIMAL GEARBOX

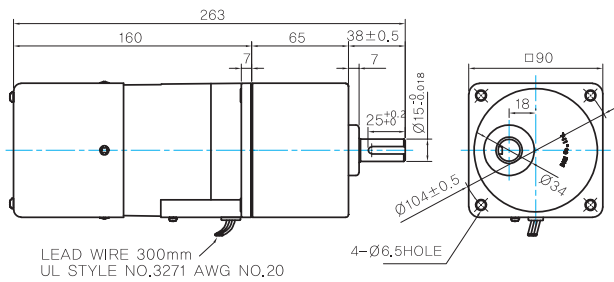
- MODEL: 9XD10□□



### GEARED MOTOR

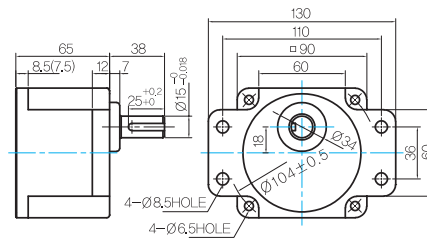
#### P TYPE GEARBOX

- MOTOR MODEL:  
9TDG□-30F2P (POWERFUL FAN)



- GEARBOX MODEL:  
9PBK□BH

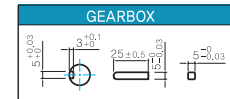
- GEARBOX MODEL:  
9PFK□BH



- GEARBOX OUTPUT SHAFT

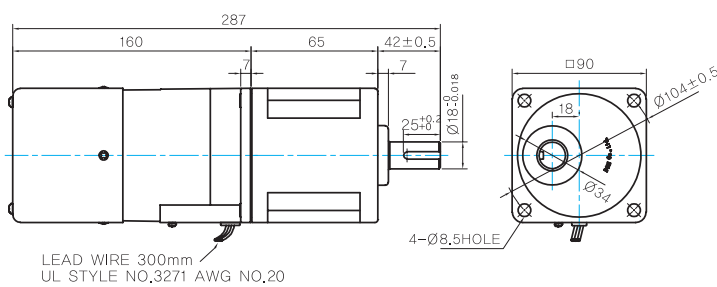
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

- KEY SPEC



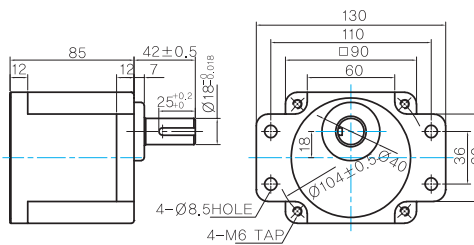
#### H TYPE GEARBOX

- MOTOR MODEL:  
9TDG□-30F2H (POWERFUL FAN)



- GEARBOX MODEL:  
9HBK□BH

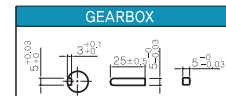
- GEARBOX MODEL:  
9HFK□BH



- GEARBOX OUTPUT SHAFT

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

- KEY SPEC



### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3.05	
GEAR BOX	9PB(F)K25BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9HB(F)K3BH - 9HB(F)K10BH	1.62
	9HB(F)K12.5BH - 9HB(F)K20BH	1.68
	9HB(F)K25BH - 9HB(F)K60BH	1.73
	9HB(F)K75BH - 9HB(F)K200BH	1.78
9XD10□□	0.6	

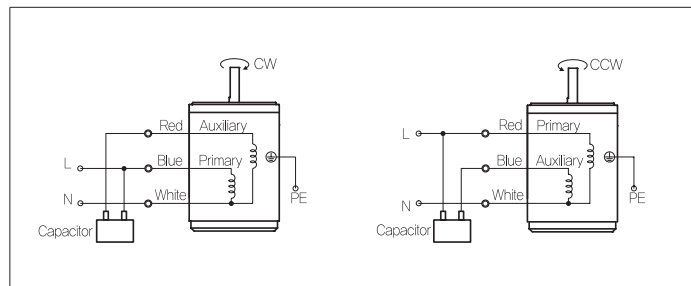
# B AC Motors

Torque Motor 30W(□ 90mm)

## Motor Images



## Connection Diagrams



- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# 40W Torque Motor

40W(□ 90mm)

## Motor Specification

Model 9TDG*-40F2 □ : Gear Type Shaft 9TDD*-40F2: D-Cut Type Shaft 9TDK*-40F2: Key Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
9TDG1(A)-40F2 □	5min.	1 ∅ 110	60	4	8.00	0.800	40	900	2.00	4.33	0.433	25.0 / 250
	Cont.	1 ∅ 60			2.42	0.242						
9TDG2(D)-40F2 □	5min.	1 ∅ 220	60	4	7.72	0.772	40	900	1.01	4.33	0.433	6.5 / 450
	Cont.	1 ∅ 140			3.35	0.335						
9TDGE-40F2 □	5min.	1 ∅ 220~240	50	4	7.27	0.727	40	750	0.88	5.19	0.519	6.5 / 450
	Cont.	1 ∅ 140			3.29	0.329						

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Max. Permissible Torque at Output Shaft of Gearbox

### 60Hz

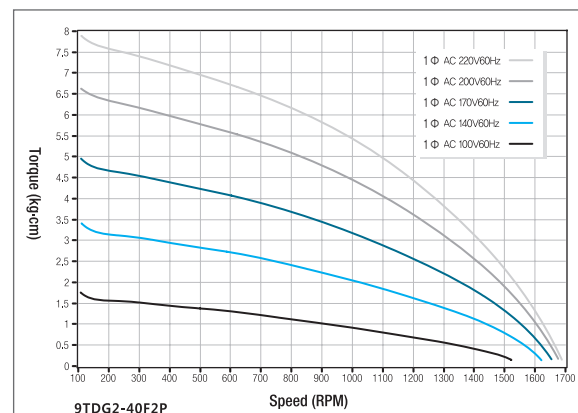
Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-40F2P	9PBK □ BH 9PFK □ BH	5min.	kgfcm 0.69	7.0	10.5	12.6	17.5	21.0	26.3	31.6	35.1	39.5	47.4	56.9	63.2	71.4	85.7	102.9	114.3	142.9	171.4	191.6	200.0	200.0	200.0	200.0	200.0	200.0
		Cont.	kgfcm N.m	2.3 0.22	3.4 0.34	4.1 0.40	5.7 0.56	6.8 0.67	8.5 0.84	10.3 1.01	11.4 1.12	12.8 1.26	15.4 1.51	18.5 1.81	20.5 2.01	23.2 2.27	27.9 2.73	33.4 3.28	37.1 3.64	46.4 4.55	55.7 5.46	62.3 6.10	74.7 7.32	83.0 8.13	99.6 9.76	124.5 12.20	149.4 14.64	166.0 16.27
9TDG*-40F2H	9HBK □ BH 9HFK □ BH	5min.	kgfcm N.m	-	10.5 1.03	12.6 1.24	17.5 1.72	21.0 2.06	26.3 2.58	31.6 3.09	35.1 3.44	39.5 3.87	47.4 4.65	56.9 5.57	63.2 6.19	71.4 7.00	85.7 8.40	102.9 10.08	114.3 11.20	142.9 14.00	171.4 16.80	191.6 18.77	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	
		Cont.	kgfcm N.m	-	3.4 0.34	4.1 0.40	5.7 0.56	6.8 0.67	8.5 0.84	10.3 1.01	11.4 1.12	12.8 1.26	15.4 1.51	18.5 1.81	20.5 2.01	23.2 2.27	27.9 2.73	33.4 3.28	37.1 3.64	46.4 4.55	55.7 5.46	62.3 6.10	74.7 7.32	83.0 8.13	99.6 9.76	124.5 12.20	149.4 14.64	166.0 16.27

### 50Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
9TDG*-40F2P	9PBK □ BH 9PFK □ BH	5min.	kgfcm N.m	8.4 0.82	12.6 1.24	15.1 1.48	21.0 2.06	25.2 2.47	31.6 3.09	37.9 3.71	42.1 4.12	47.4 4.65	56.9 5.57	68.3 6.69	75.8 7.43	85.7 8.40	102.9 10.08	123.4 12.10	137.1 13.44	171.4 16.80	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
		Cont.	kgfcm N.m	2.7 0.27	4.1 0.40	4.9 0.48	6.8 0.67	8.2 0.80	10.3 1.01	12.3 1.21	13.7 1.34	15.4 1.51	18.5 1.81	22.2 2.17	24.6 2.42	27.9 2.73	33.4 3.28	40.1 3.93	44.6 4.37	55.7 5.46	66.9 6.55	74.7 7.32	89.6 8.79	99.6 9.76	119.5 11.71	149.4 14.64	179.3 17.57
9TDG*-40F2H	9HBK □ BH 9HFK □ BH	5min.	kgfcm N.m	-	12.6 1.24	15.1 1.48	21.0 2.06	25.2 2.47	31.6 3.09	37.9 3.71	42.1 4.12	47.4 4.65	56.9 5.57	68.3 6.69	75.8 7.43	85.7 8.40	102.9 10.08	123.4 12.10	137.1 13.44	171.4 16.80	205.7 20.16	229.9 22.53	275.8 27.03	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
		Cont.	kgfcm N.m	-	4.1 0.40	4.9 0.48	6.8 0.67	8.2 0.80	10.3 1.01	12.3 1.21	13.7 1.34	15.4 1.51	18.5 1.81	22.2 2.17	24.6 2.42	27.9 2.73	33.4 3.28	40.1 3.93	44.6 4.37	55.7 5.46	66.9 6.55	74.7 7.32	89.6 8.79	99.6 9.76	119.5 11.71	149.4 14.64	179.3 17.57

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

## Speed-Torque Characteristics





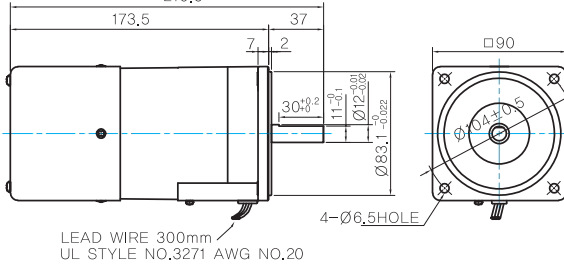
# B AC Motors

## Torque Motor 40W(□ 90mm)

### Dimensions

#### MOTOR ONLY

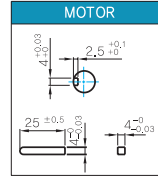
- MOTOR MODEL:  
9TDD□-40F2 (POWERFUL FAN)  
210,5



#### MOTOR OUTPUT SHAFT

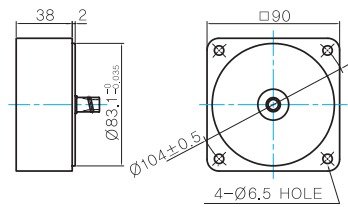
MODEL	SPEC
D-CUT TYPE	37 30±0,2 11±0,1 12±0,05 Ø12±0,05
KEY TYPE	37 25±0,2 Ø12±0,05
9TDD□-40F2	
9TDK□-40F2	

#### KEY SPEC



#### INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□

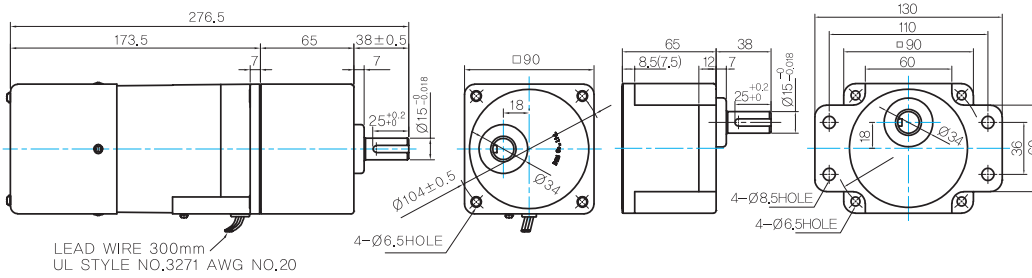


#### GEARED MOTOR

#### P TYPE GEARBOX

- MOTOR MODEL:  
9TDG□-40F2P (POWERFUL FAN)  
276,5

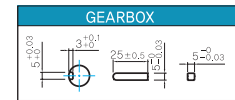
- GEARBOX MODEL:  
9PBK□BH
- GEARBOX MODEL:  
9PFK□BH



#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	38 25±0,2 Ø15±0,018
9PBK□BH	
9PFK□BH	

#### KEY SPEC

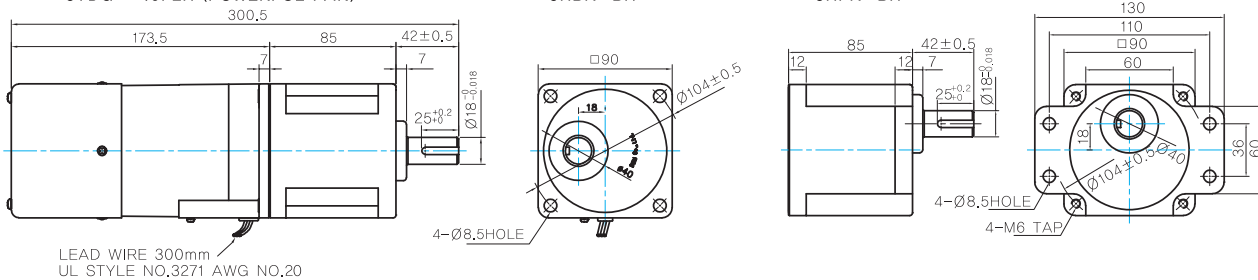


#### H TYPE GEARBOX

- MOTOR MODEL:  
9TDG□-40F2H (POWERFUL FAN)  
300,5

- GEARBOX MODEL:  
9HBK□BH

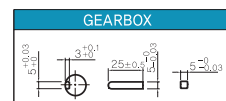
- GEARBOX MODEL:  
9HFK□BH



#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	42 25±0,2 Ø15±0,018
9HBK□BH	
9HFK□BH	

#### KEY SPEC



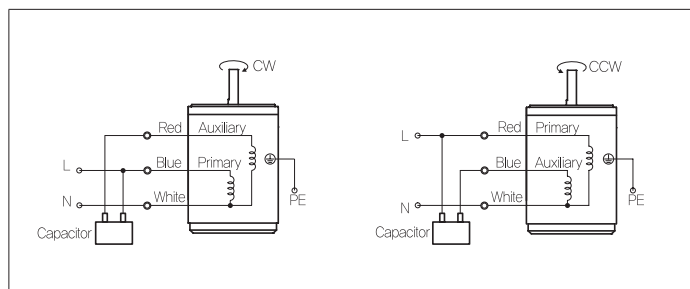
#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3,4	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12.5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9HB(F)K3BH - 9HB(F)K10BH	1,62
	9HB(F)K12.5BH - 9HB(F)K20BH	1,68
	9HB(F)K25BH - 9HB(F)K60BH	1,73
	9HB(F)K75BH - 9HB(F)K200BH	1,78
	9XD10□□	0,6

## Motor Images



## Connection Diagrams



- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.

# B AC Motors

## Torque Motor 60W(□ 90mm)

# 60W Torque Motor 60W(□ 90mm)

### Motor Specification

Model 9TDG*-60F2□: Gear Type Shaft 9TDD*-60F2: D-Cut Type Shaft 9TDK*-60F2: Key Type Shaft	Rating at Locked Rotor	Voltage V	Frequency Hz	Poles	Starting Torque		At max. Output Power				Capacitor μF / VAC	
					kgfcm	N.m	Output W	Speed r/min	Current A	Torque kgfcm N.m		
9TDG1(A)-60F2□	5min.	1φ 110	60	4	8.80	0.880	60	900	2.50	6.49	0.649	30.0 / 250
	Cont.	1φ 70			3.60	0.360	20		1.50	2.16	0.216	
9TDG2(D)-60F2□	5min.	1φ 220	60	4	9.70	0.970	60		1.20	6.49	0.649	8.0 / 450
	Cont.	1φ 140			4.10	0.410	20		0.80	2.16	0.216	
9TDGE-60F2□	5min.	1φ 220~240	50	4	9.50	0.950	60	750	1.10	7.79	0.779	8.0 / 450
	Cont.	1φ 140			4.00	0.400	20		0.70	2.60	0.260	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

#### 60Hz

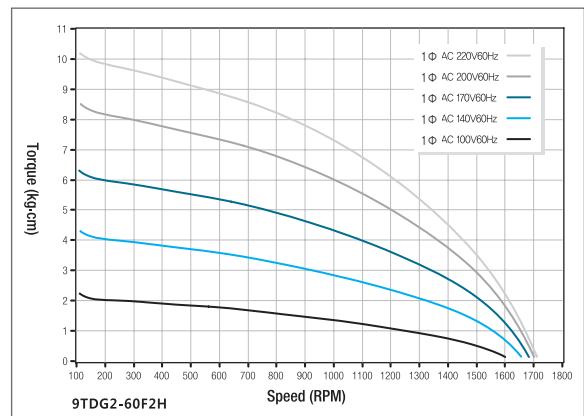
Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-60F2P	9PBK□BH 9PFK□BH	5min.	kgfcm N.m	14.3 1.40	21.4 2.10	25.7 2.51	35.6 3.49	42.8 4.19	53.5 5.24	64.2 6.29	71.3 6.99	80.3 7.87	96.4 9.44	115.6 11.33	128.5 12.59	145.2 14.23	174.2 17.08	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
		Cont.	kgfcm N.m	5.8 0.57	8.7 0.86	10.5 1.03	14.6 1.43	17.5 1.71	21.9 2.14	26.2 2.57	29.2 2.86	32.9 3.22	39.4 3.86	47.3 4.64	52.6 5.15	59.4 5.82	69.9 6.99	83.8 8.38	95.0 9.31	116.4 11.64	139.7 13.97	156.1 15.61	187.3 18.73	196.0 19.60	200.0 20.00	200.0 20.00	200.0 20.00	200.0 20.00
9TDG*-60F2H	9HBK□BH 9HFK□BH	5min.	kgfcm N.m	-	21.4 2.10	25.7 2.51	35.6 3.49	42.8 4.19	53.5 5.24	64.2 6.29	71.3 6.99	80.3 7.87	96.4 9.44	115.6 11.33	128.5 12.59	145.2 14.23	174.2 17.08	209.1 20.49	232.3 22.77	290.4 28.46	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
		Cont.	kgfcm N.m	-	8.7 0.86	10.5 1.03	14.6 1.43	17.5 1.71	21.9 2.14	26.2 2.57	29.2 2.86	32.9 3.22	39.4 3.86	47.3 4.64	52.6 5.15	59.4 5.82	69.9 6.99	83.8 8.38	95.0 9.31	116.4 11.64	139.7 13.97	156.1 15.61	187.3 18.73	208.2 20.82	249.8 24.98	300.0 29.40	300.0 29.40	300.0 29.40

#### 50Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
9TDG*-60F2P	9PBK□BH 9PFK□BH	5min.	kgfcm N.m	15.4 1.51	23.1 2.26	27.7 2.71	38.5 3.77	46.2 4.52	57.7 5.66	69.3 6.79	77.0 7.54	86.7 8.50	104.0 10.19	124.8 12.23	138.7 13.59	156.8 15.36	188.1 18.43	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
		Cont.	kgfcm N.m	6.5 0.64	9.7 0.95	11.7 1.14	16.2 1.59	19.4 1.91	24.3 2.38	29.2 2.86	32.4 3.18	36.5 3.58	43.8 4.29	52.6 5.15	58.4 5.72	66.0 6.47	79.2 7.76	95.0 9.31	105.6 10.35	132.0 12.94	158.4 15.52	177.0 17.35	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
9TDG*-60F2H	9HBK□BH 9HFK□BH	5min.	kgfcm N.m	-	23.1 2.26	27.7 2.71	38.5 3.77	46.2 4.52	57.7 5.66	69.3 6.79	77.0 7.54	86.7 8.50	104.0 10.19	124.8 12.23	138.7 13.59	156.8 15.36	188.1 18.43	225.7 22.12	250.8 24.58	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
		Cont.	kgfcm N.m	-	9.7 0.95	11.7 1.14	16.2 1.59	19.4 1.91	24.3 2.38	29.2 2.86	32.4 3.18	36.5 3.58	43.8 4.29	52.6 5.15	58.4 5.72	66.0 6.47	79.2 7.76	95.0 9.31	105.6 10.35	132.0 12.94	158.4 15.52	177.0 17.35	208.2 20.82	236.0 23.60	283.2 27.75	300.0 29.40	300.0 29.40	300.0 29.40

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

### Speed-Torque Characteristics





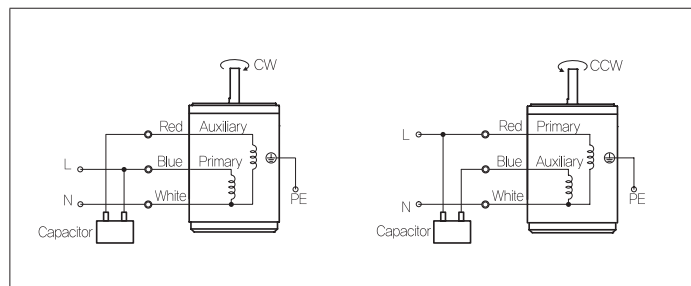
# B AC Motors

Torque Motor 60W(□ 90mm)

## Motor Images



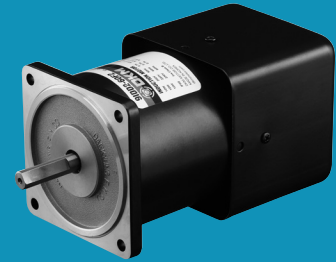
## Connection Diagrams



- 1) The direction of motor rotation is as viewed from the shaft end of the motor.
- 2) CW represents the clockwise direction, while CCW represents the counterclockwise direction.
- 3) Change the direction of single phase motor rotation only after bringing the motor to a stop. If an attempt is made to change the direction of rotation while the motor is rotating, the motor may ignore the reversing command or change its direction after some delay.



# Speed Control System



## Index






<b>Outline of AC Speed Control System</b>	<b>B-207</b>
<b>Speed Controller FX3000</b>	<b>B-209</b>
<b>Speed Controller DX3000</b>	<b>B-213</b>
<b>Speed Controller DSA</b>	<b>B-217</b>
<b>Speed Controller DSKM</b>	<b>B-219</b>
<b>Speed Control Induction Motor</b>	<b>B-224</b>
<b>Speed Control Reversible Motor</b>	<b>B-258</b>
<b>Speed Control Brake Motor</b>	<b>B-288</b>
<b>Speed Control Clutch &amp; Brake Motor</b>	<b>B-322</b>

# B AC Motors

## Outline of AC Speed Control System

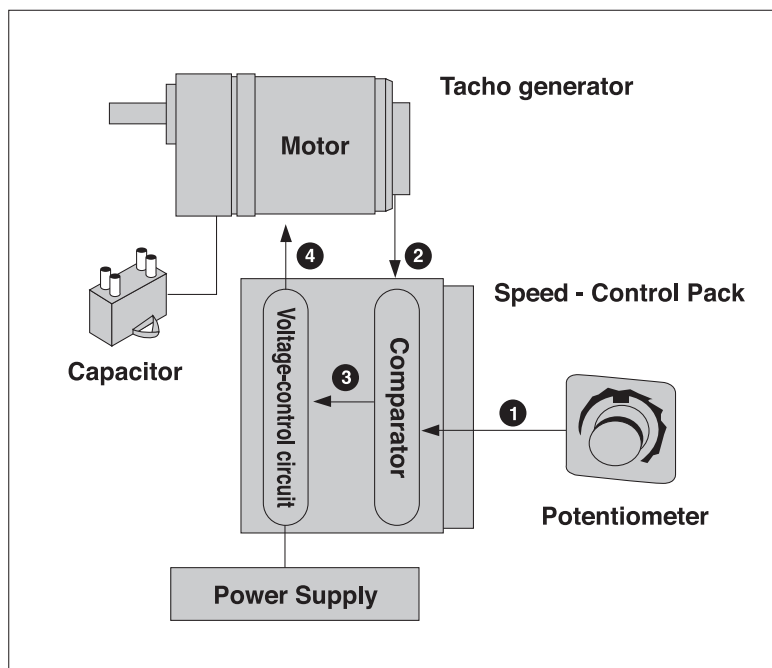
### Features

- DKM Motor allows you easily to set and adjust the motor speed. There are five kinds of AC speed controller as shown below. Select the best system depending upon your application. .

FX3000	DX3000	DSA	DSKM	
				
<ul style="list-style-type: none"> <li>- Digital Speed Display</li> <li>- Speed, Torque Control</li> <li>- Simple Dial</li> <li>- Gear Ratio Setting</li> <li>- Acceleration Time Setting</li> </ul>	<ul style="list-style-type: none"> <li>- RS485 Communication Control</li> <li>- PLC I/O Control</li> <li>- Speed, Torque Control</li> <li>- Gear Ratio Setting</li> <li>- Acceleration Time Setting</li> </ul>	<ul style="list-style-type: none"> <li>- Analog Type</li> <li>- Connect the motor and control unit together using the connetcor</li> <li>- built-in capacitor</li> </ul>	<ul style="list-style-type: none"> <li>- Socket Type Controller</li> <li>- Multi-Stage Speed Setting (Install external volume separately)</li> <li>- Electric Brake Function (Install resistance coil separately)</li> </ul>	

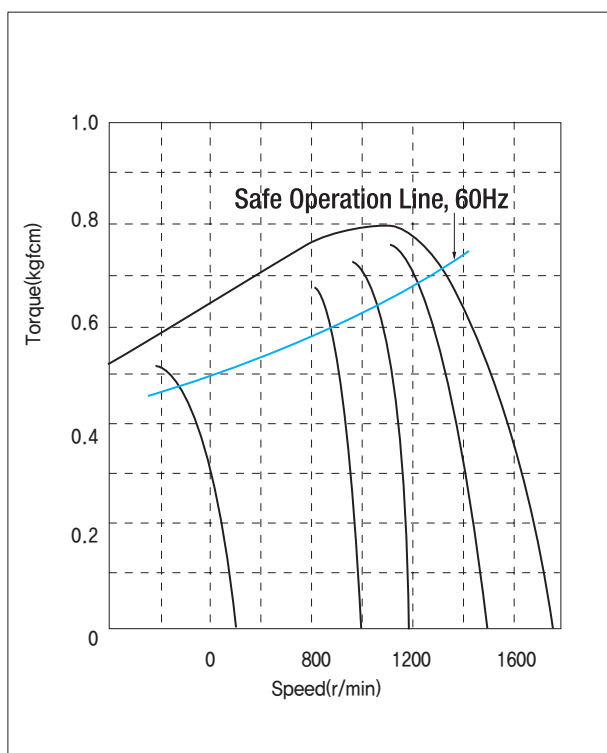
### Speed Control Methods of Speed Control System

- Set the speed setting voltage with potentiometer.
- Tacho generator detects the speed signal voltage.
- The comparator outputs the difference between the speed setting voltage and speed signal voltage.
- A voltage determined by the output from the comparator is supplied to the motor so that it will reach the set speed.



## Speed-Torque Characteristics of Speed Control System and Safe Operation Line

- The speed-torque characteristics line of all AC speed control motors is shown in the graph below. Each set speed changes slightly according to the change in load torque.



Input power to the speed control motor depends on the load and speed. The greater the load and the lower the speed, the greater the increase in motor temperature. In the speed-torque characteristics graph, the line is referred to as the safe operation line, while the area below the line is called the continuous operation area. The safe operation line, measured according to the motor temperature, indicates its operational limit for continuous usage with the temperature. Whether the motor can be operated at a specific torque and speed is determined by measuring the temperature of the motor case. In general, if the temperature of the motor case is below 90°C, continuous operation is possible considering the insulation class of motor coil winding. But the motor life could be extended with lower temperatures. So it is recommended that the motor be used under conditions that keep the motor temperature low. DKM has two kinds of cooling fans: General Fan(F Type) and Powerful Fan(F2 Type). The general fan is mounted on the motor shaft and its speed depends on the motor shaft speed.

So in the slow speed of the motor, there is a very weak cooling effect. In the application where motor speeds could be changed from low speed (below 1,000r/min) to high speed like a speed control motor, a powerful fan is needed so that the cooling effect keeps constant regardless of the motor speed. In the case of speed control motors powerful fan(F2 type) is used for them. In a special application or by user's requests, a general fan could be used for speed control motors.

- Do not exceed 'Max. Permissible Torque at Output Shaft of Gearbox'. It may damage the gearbox and shorten its life to operate the machine with the gearbox over 'Max. Permissible Torque at Output Shaft of Gearbox'.

## General Specifications

Item	Specifications
Insulation Resistance	100MΩ or more when DC500V MEGA is applied between the windings and the frame after rated motor operation under normal ambient temperature and humidity.
Dielectric Strength	Sufficient to withstand 1.5KV at 50Hz and 60Hz applied between the windings and the frame for 1 minute after rated motor operation under normal ambient temperature and humidity.
Temperature Rise	Temperature rise of windings are 80°C or less measured by the resistance change method after rated motor operation with connecting a gearbox or equivalent heat radiation plate.
Insulation Class	Class B [130°C]
Overheat Protection	Operating temperature (Built-in thermal protector type motor): Open 120°C±5°C, Close 90°C±5°C
Ambient Temperature	-10°C~+40°C (Three phase 220VAC: -10°C~+50°C)
Ambient Humidity	85% maximum



# B AC Motors

## Speed Controller FX3000

# FX3000

## Speed Controller

### Special Features

- Easy, Simple Wiring**  
 Possible to control the speed and torque of the motor simply by connecting a motor and control unit with connector and inputting the AC terminal to the power source.
- Easy Wiring and Maintenance**  
 The screwless connector is used for FX3000.
- Efficient and Convenient Operation**  
 Possible to control speed and torque easily with the front panel dial.
- Digital Display**  
 Display the current rotation speed(r/min) and torque(%).
- Various Functions**  
 Possible to operate various functions by setting the parameter.



### General Specifications

Model	FX3000-□□	
Rated Voltage	1∅ AC 220~240V 50/60Hz ±10 %	
Allowable Current	Below 6 A	
Control Function	Speed Control, Torque Control	
Control System	Phase Control	
Operating Range	Speed Control	50Hz : 90~1400r/min 60Hz : 90~1700r/min
	Torque Control	0 ~ 100 %
Speed Control	Internal volume	
Speed Variation	±5%(Standard Value)	
Motor Output	3W~180W	
Ambient Temperature	-10C°~ 55C°	
Ambient Humidity	35 ~ 85%RH (Without condensation)	
Insulation Resistance	Over DC 500V 100MΩ (between power supply and external terminal)	
Dielectric Strength	AC 1500V 1minute (between power supply and external terminal)	

## CONTROLLER CODING SYSTEM

**FX3000** — **060**

Controller Model

OUTPUT

**003:** 3W    **030:** 30W  
**006:** 6W    **040:** 40W  
**010:** 10W   **060:** 60W  
**015:** 15W   **090:** 90W  
**020:** 20W   **120:** 120W  
**025:** 25W   **180:** 180W

**S**

TYPE

**S:** Speed Control Motor  
**T:** Torque Control Motor

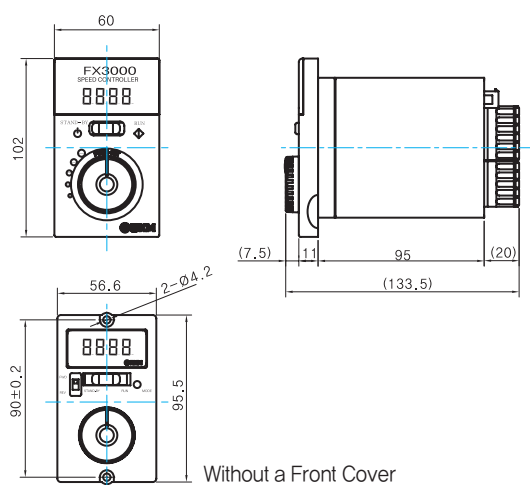
\*Initial setting mode is speed control.  
 Please change to '1' (torque motor) on parameter 'Pr04'(control mode), if using torque motor.  
 Regarding changing method, please refer to 'Parameter Setting Procedure'.

## Combination Table

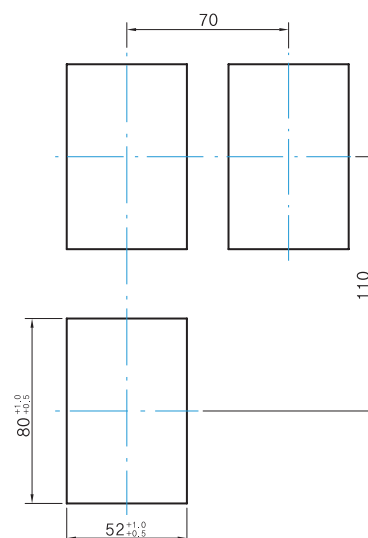
Item	Output	Motor Model	Controller Model
SPEED MOTOR	6W	6SD□□-6□	FX3000-006 S
		7SD□□-6□	
	10W	7SD□□-10□	FX3000-010 S
	15W	7SD□□-15□	FX3000-015 S
		8SD□□-15□	
	25W	8SD□□-25□	FX3000-025 S
	40W	9SD□□-40□	FX3000-040 S
	60W	9SD□□-60F2□	FX3000-060 S
	90W	9SD□□-90F2□	FX3000-090 S
	120W	9SD□□-120F2□	FX3000-120 S
180W	9SD□□-180F2□	FX3000-180 S	

Item	Output	Motor Model	Controller Model
TORQUE MOTOR	3W	6TD□□-3□	FX3000-003 T
	6W	7TD□□-6□	FX3000-006 T
	10W	8TD□□-10□	FX3000-010 T
	20W	9TD□□-20F2□	FX3000-020 T
	30W	9TD□□-30F2□	FX3000-030 T
	40W	9TD□□-40F2□	FX3000-040 T
	60W	9TD□□-60F2□	FX3000-060 T

## Dimensions



## Mounting Panel Dimension

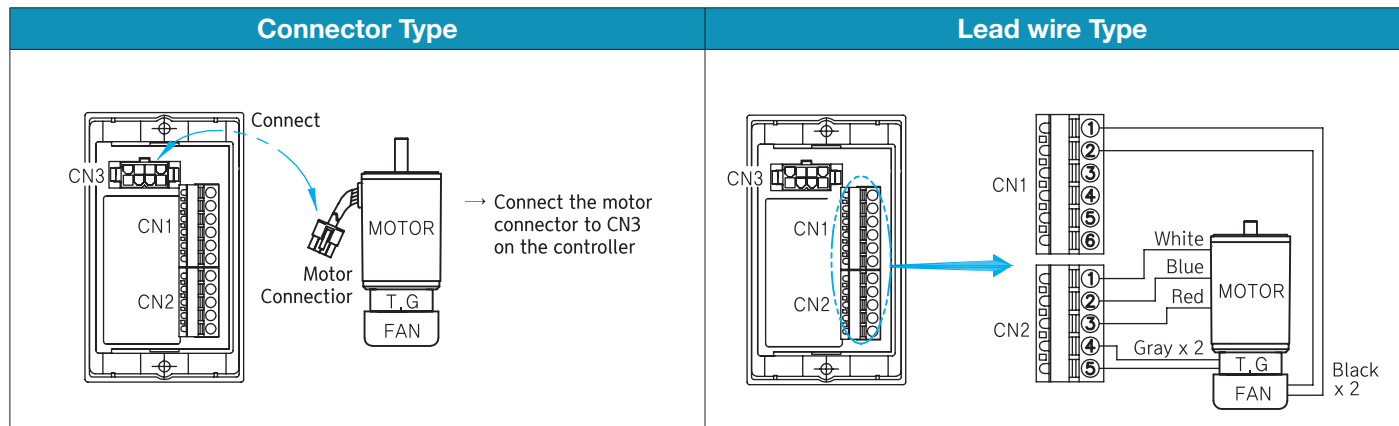


# B AC Motors

## Speed Controller FX3000

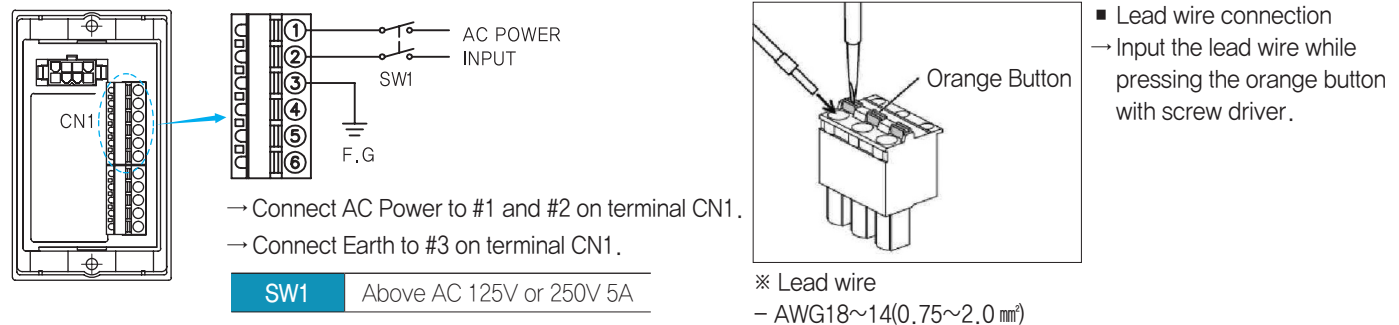
### Wiring Diagram

#### Speed Control Motor or Torque Motor

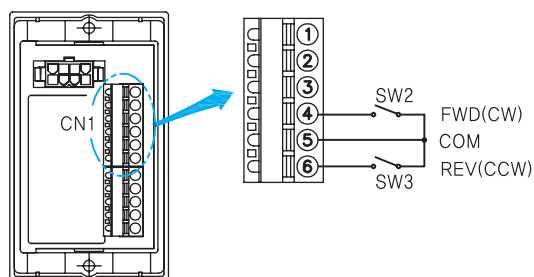


- ※ Depending on the motor type and specification, there can be no powerful fan cable (Blackx2), T.G cable (Greyx2).
- ※ You could use FX3000 with motors and gearboxes from other brand.

#### Controller Power Connection



#### Uni-directional operation



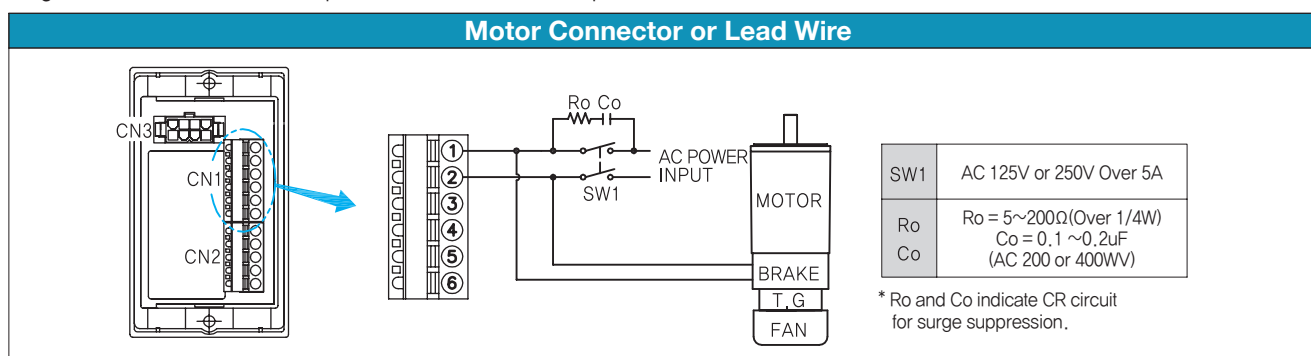
\* In case of RUN/ STOP operation externally, please make sure that the switch position should be on STAND-BY and connect #4, #5, and #6 on terminal CN1.

SW2	SW3	Motor Shaft
ON	OFF	Rotate to FWD
OFF	ON	Rotate to REV
OFF	OFF	STOP

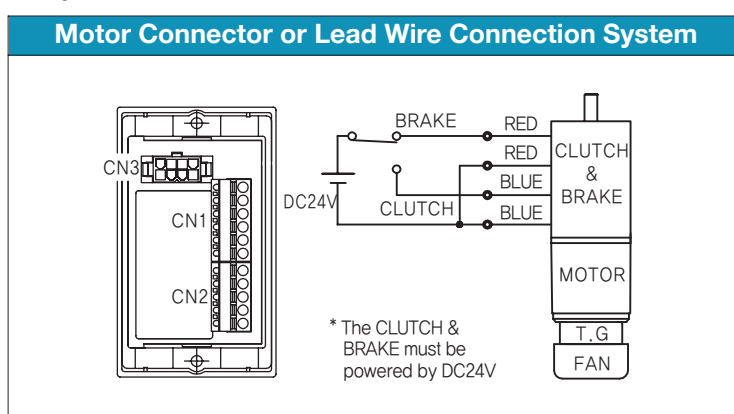
※ Front switch should be at STAND-BY position when operating by external signal. (Connect only for external RUN/STOP)

### Speed Control Brake Motor

– Please refer to the wiring diagram below which is the wiring diagram of Speed Control Brake Motor, and the other motor's wiring diagrams are the same as the Speed Control Motor or Torque Motor.



### Speed Control Clutch & Brake Motor



– Please refer to the wiring diagram which is the wiring diagram of the Clutch & Brake, and the wiring diagram for the others is the same as the 'Speed Control Motor or Torque Motor'.

### Parameter Contents

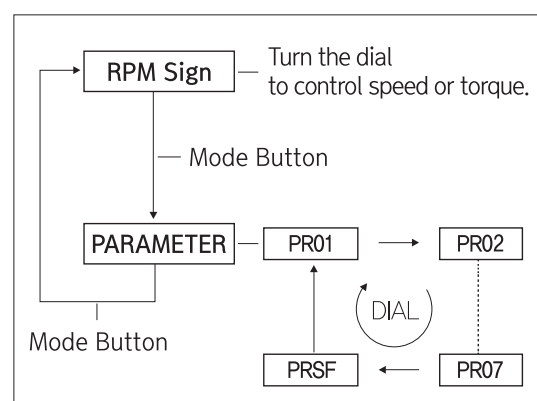
Parameter NO.	Display	Function	Range	Standard Value	Remark
1	Pr01	Acceleration Time	0~15.0	0.1	Time(second) to reach the set speed
2	Pr02	Rotation Direction	0,1	0	0 : Clockwise 1 : Counterclockwise
3	Pr03	Gear Ratio	1~999	1.0	Input gear ratio
4	Pr04	Control Mode	0,1	0	0: Speed Control 1: Torque Control
5	Pr05	P Gain	0~255	100	
6	Pr06	I Gain	0~255	50	
7	Pr07	Parameter Reset	–	0	Reset when pressing and holding the SET button
SF	PrSF	Software Version	–	–	Display the software version

\* Speed Control P, I gain

– Parameter which determines responsibility of speed control.

– Vibration and hunting may occur if the value is too large.

### Product Formation



※ Press the dial (SET button) to enter the parameter data.

※ Press and hold the dial (SET button) to change the parameter data.

# B AC Motors

## Speed Controller DX3000

# DX3000

## Speed Controller

### Features

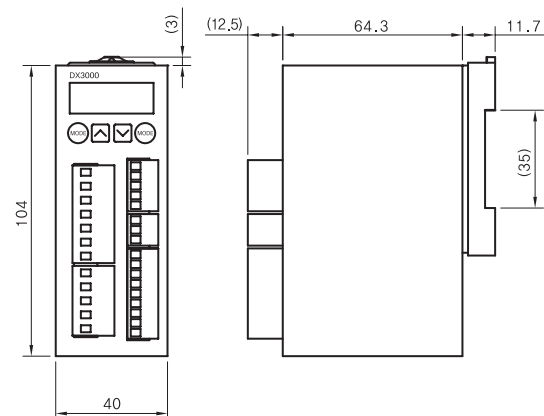
- RS485 Communication**  
 Possible to connect up to 255 devices with Modbus Communication Protocol.
- PLC I/O Control**  
 Control the system by PLC I/O (No Need Relay)
- Easy Wiring and Maintenance**  
 Easy installation and detachment with connector (Easy maintenance)  
 Simple installation in DIN rail
- Digital Display**  
 Display the current rotation speed(r/min) and torque(%) on the screen. Possible to connect a external touch screen and adjust speed.
- Various Parameter Function**  
 Possible to operate various functions by setting the parameter.



### General Specifications

Model		DX3000	
General Specifications	Rated Voltage	Motor Power	AC 220~240V 50Hz / 60Hz ±10%
		Control Power	DC 24V ±10%
	Rated Current [A]	4	
	Max. Current [A]	6	
	Control Function	Speed Control, Torque Control	
	Control System	Phase Control	
	Dimension [mm]	40(W) × 104(H) × 65(D)	
	Speed Control Range	50Hz : 100 ~ 1460 r/min 60Hz : 100 ~ 1760 r/min	
	Torque Control Range	0 ~ 100% (Maximum Torque)	
	Feedback Sensor	Tacho - 12 ppr	
Ambient Temperature	-10 °C ~ 55 °C		
Input & Output specifications	Sequence Input	Forward, Reverse, Alarm reset, Velocity select	
	Sequence Output	Speed pulse out, Alarm out	
Built-in functions	Protection Function	Parameter error, AC low voltage alarm, EEPROM	
	Condition Mark	4 Digit Display (7-Segment)	
Communication Mode		Serial Communication ( RS485 - MODBUS RTU )	

### Dimensions



## RS 485 Communication

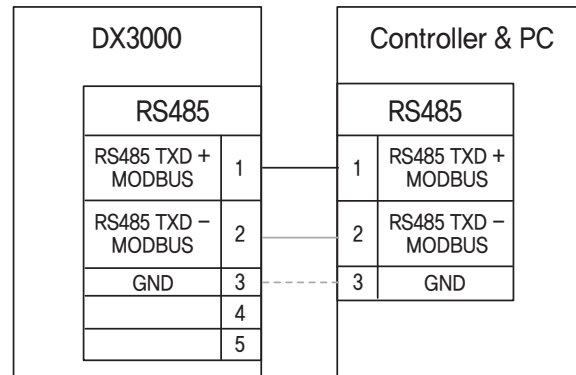
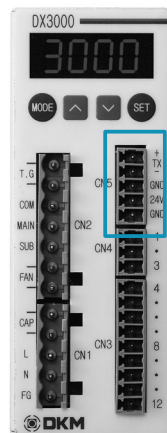
### Communication Mode

→ MODBUS RTU Slave Mode

### Register Support

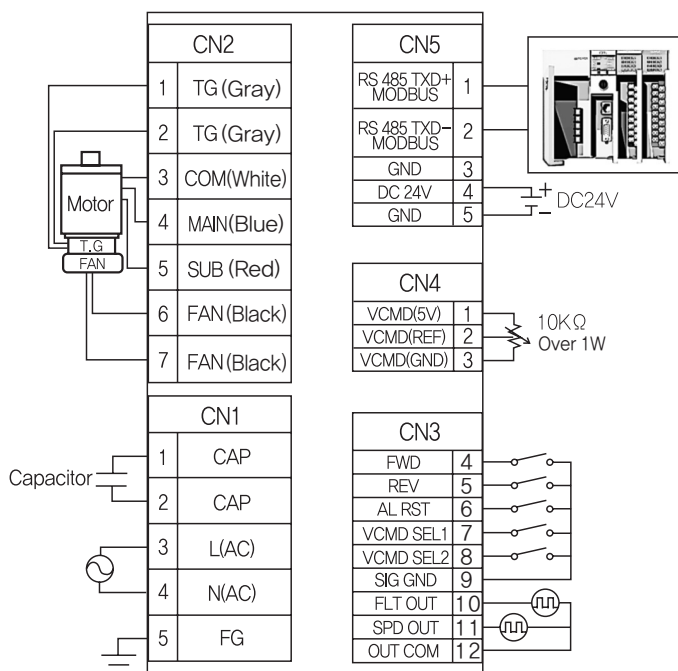
- 0x03 (Read Holding Registers)
- 0x04 (Read Input Registers)
- 0x06 (Write Single Registers)
- 0x03 (Read Holding Registers)

### Communication Connection Diagram



- When connecting the communication GND, please connect GND of Controller & PC to PIN No. 3 of CN5.
- Please visit our website to download communication manual.

## Controller Connection Diagram



## Function of CN3 Connector

NO.	Name	Description	Remark
4	FORWARD RUN	Forward operation switch	Input Signal
5	REVERSE RUN	Reverse operation switch	Input Signal
6	ALARM RESET	Alarm reset switch	Input Signal
7	SPEED SELECT1	Input select switch between internal and external input * Select operation mode with parameter No. 7 * Internal Speed: Parameter No.30~No.32 * External Speed: Input external variable resistance	Input Signal
8	SPEED SELECT2	Input select switch between internal and external input * Internal Torque: Parameter No.33~No.35 * External Torque: Input external variable resistance	Input Signal
9	SIGNAL COMMON	Motor switch input COMMON	COMMON
10	FAULT OUT	Output controller status * Change output contact (A or B) according to parameter No.10	Output Signal
11	SPEED OUT	Motor operating speed output * 12 Pulse output per a rotation of the motor	Output Signal
12	OUT COMMON	Output Contact Common	COMMON

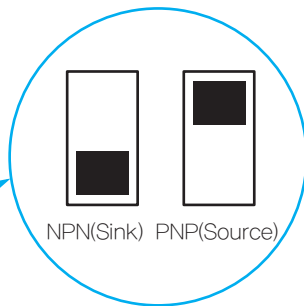
## Function of CN4 Connector

NO.	Name	Description	Remark
1	VCMD V	External speed command potentiometer + voltage output	5V Output
2	VCMD Vref	External speed directive value input	Voltage input
3	VCMD GND	Connect to external speed directive GND	V GND

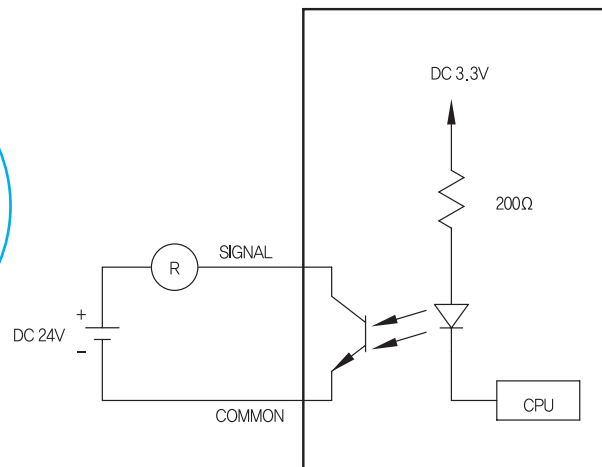
# B AC Motors

## Speed Controller DX3000

### I/O Signal Circuit

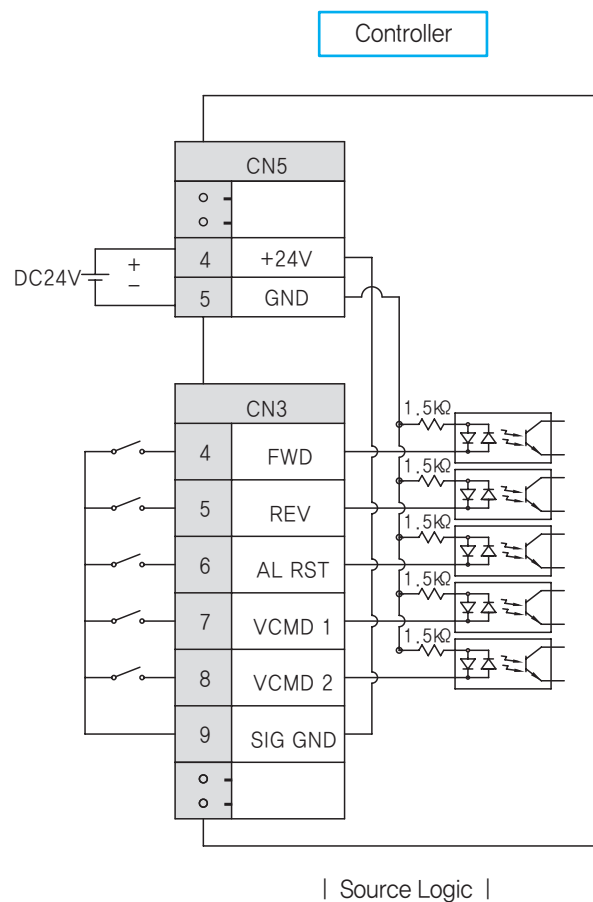
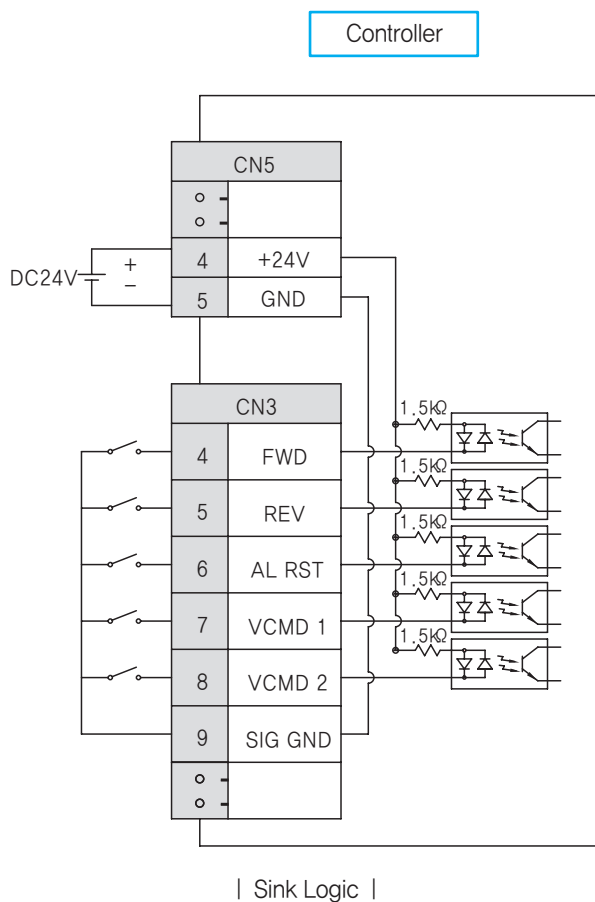


### Output Circuit



- Input COMMON(NPN, PNP) is set with the bottom switch of controller internal circuit board
- Initial Setting: NPN

### Input Circuit



## Parameter Contents

NO.	Function	Range	Standard value	Note
1	Max. Speed	1460/1760	–	r/min
3	Speed Limit	50~1760	1760	r/min
4	Acceleration Time	0~15.0	0.1	Second (S)
5	Rotation Direction	0~1	0	
6	Gear Ratio	1~250	1	0
7	Control Mode	0~1	0	0 : Speed Control 1 : Torque Control
8	Zero Clamp	0~0.5	0.0	Voltage (V)
9	Speed Command Offset	0~0.5	0	Voltage (V)
10	Abnormal Signal Output	0~1	0	
13	Speed Control P Gain	1~255	100	
14	Speed Control I Gain	1~255	50	
20	Communication ID Setting	1~254	1	
21	IO Input Setting	0~1	0	0 : CN310 Input 1 : RS485 Input
22	Speed Input Setting	0~1	0	0:CN4 Potentiometer Input 1:RS485 Speed Command input
23	RS485 Communication Speed Setting	0~4	1	0:2,400 bps 1:9,600 bps 2:19,200 bps 3:38,400 bps 4:115,200 bps
30	Internal Speed Setting 1	0~Max. Speed	500	r/min
31	Internal Speed Setting 2	0~Max. Speed	1000	r/min
32	Internal Speed Setting 3	0~Max. Speed	1500	r/min
33	Internal Torque Setting 1	0~100	10	%
34	Internal Torque Setting 2	0~100	20	%
35	Internal Torque Setting 3	0~100	50	%

### ■ Speed control P, I gain

- Parameter which determines responsibility of speed control
- Vibration and hunting occur if value is too large



# B AC Motors

## Speed Controller DSA

# DSA Speed Controller



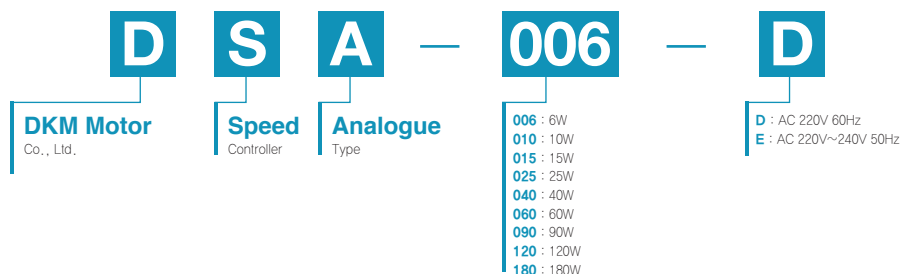
## Features

- **Easy Connection**  
Operation is possible just by connecting the control unit into power supply after connecting the motor and control unit together using the connector.
- **Easy Operation**  
The speed can be set easily with the potentiometer on the front panel of the control unit.
- **Capacitor Built-in**  
A capacitor for the speed control circuit motor and the speed setting device are assembled in the control unit.
- **Possible to connect with other brand motor**  
\* Other brand motor can be connected to the controller. Please contact us before use.

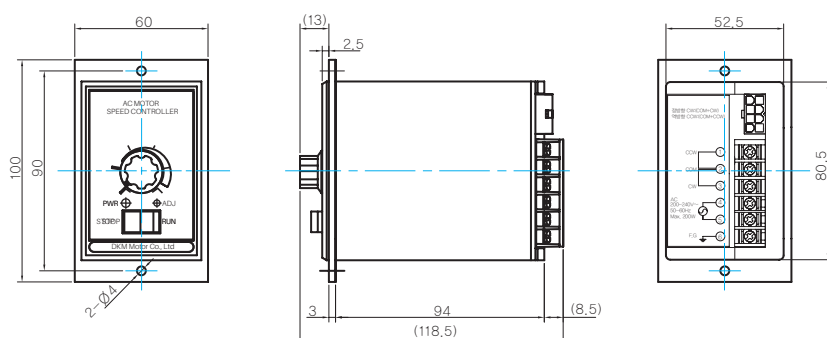
## General Specifications

Model	DSA
Rated Voltage	AC 220~240V 50/60Hz
Voltage Regulation	±10%
Allowable Current	Below 5A
Control System	Phase control
Operating Range	50Hz: 90 ~ 1400 r/min
	60Hz: 90 ~ 1700 r/min
Speed Control	Internal volume
Speed Variation	±5%(Standard)
Motor Output	6W~180W
Ambient Temperature	-10℃ ~ 40℃
Ambient Humidity	35 ~ 85%RH
Insulation Resistance	Over 100MΩ(Base on 500VDC mega)
Dielectric Strength	1500VAC 50/60 for 1minute

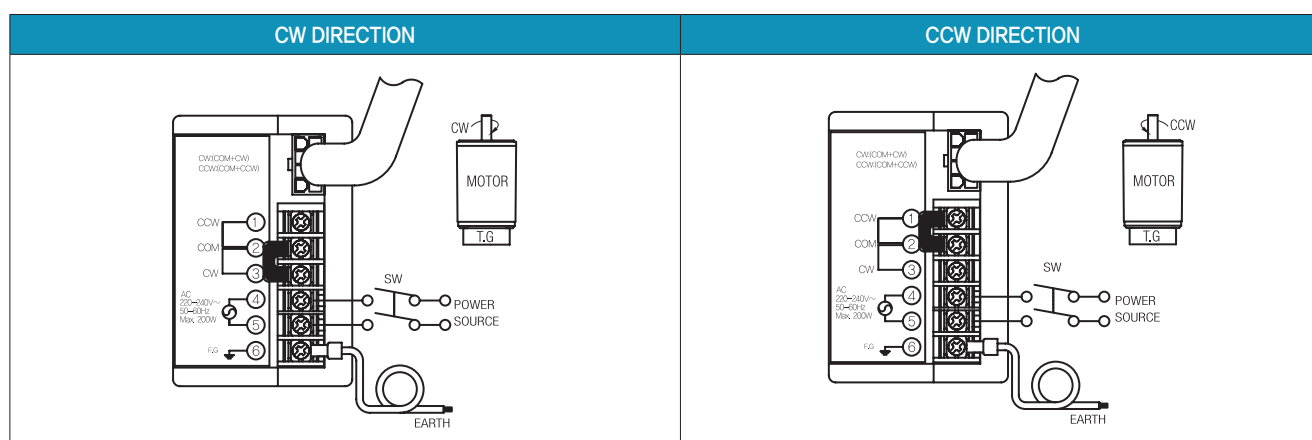
## Controller Coding System



## Dimensions



## Connection Diagram



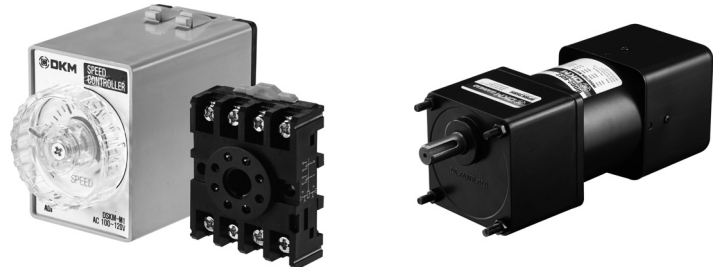
- 1) Connect control unit and lead wire connector of the motor.
- 2) Press stop button before connecting AC power to ④ and ⑤ terminals.
- 3) When AC power input, LED lights on.
- 4) CW Direction – Connect to ② COM and ③ CW  
CCW Direction – Connect to ② COM and ① CCW
- 5) Motor RPM is getting faster if speed volume turns to CW and Motor RPM is getting slower if speed volume turns to CCW.
- 6) If you operate 'RUN/STOP' switch to STOP, motor is stopped. Make sure this switch is not same as power ON/OFF.  
(When a motor has to stop for a long time, extra power switch should be installed.)

# B AC Motors

## Speed Controller DSKM

# DSKM

Speed Controller



### Features

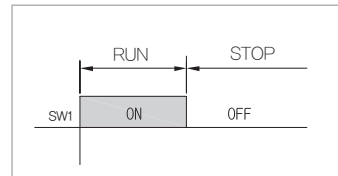
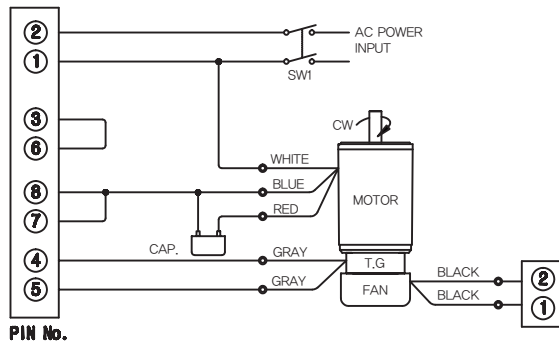
- Compact Speed Control Pack**  
 It is compact speed control pack with small plug-in (8-pin) type.
- Easy Operation**  
 The speed can be set easily with the dial on the front panel of the controller.
- External Volume Attachable**  
 The speed can be set easily with the external potentiometer which could be separated from controller body.
- Various Functions**  
 Bi-directional operation / Variable speed setting / Electric Brake / Multi-stage speed setting

### General Specifications

Model	DSKM-M1	DSKM-M2
Rated Voltage	AC 100~120V 50/60Hz	AC 220~240V 50/60Hz
Voltage Regulation	±10%	
Allowable Current	Below 4 VA	
Control System	Phase Control	
Operating Range	50Hz: 90 ~ 1400 r/min	
	60Hz: 90 ~ 1700 r/min	
Speed Control	Internal volume (External volume usable)	
Electric Brake	Possible to brake for certain period by electric brake	
Electric Braking Time	0.5second (standard value)	
Ambient Temperature	-10°C ~ 55°C	
Ambient Humidity	35 ~ 85%RH	
Insulation Resistance	Over DC 500V 100MΩ (between power supply and external terminal)	
Dielectric Strength	AC 1500V for 1 minute (between the windings and the frame)	

## Basic Electric Wiring

### Uni-directional operation + Variable speed

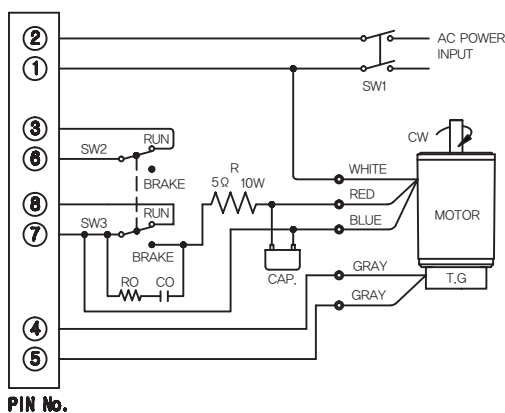


**SW1** AC 125V or 250V 5A

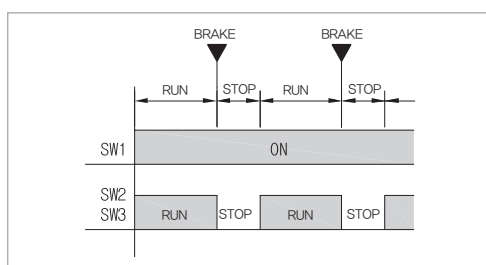
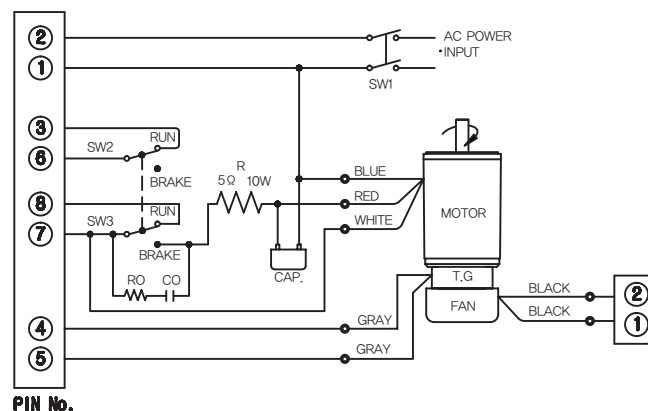
- Exchange blue and red wire of the motor for CCW direction.

### Uni-directional operation + Variable speed + Brake

- Below Motor Output 25W



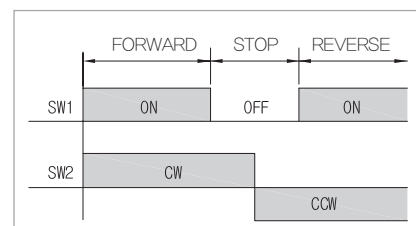
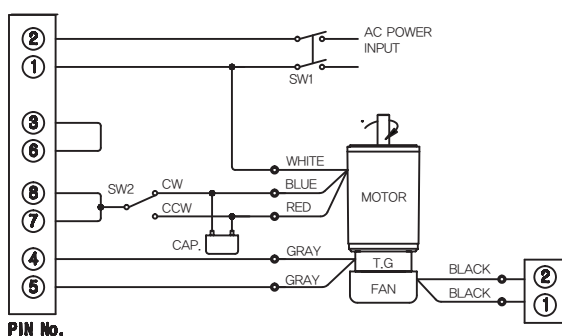
- Over Motor Output 40W



<b>SW1</b>	AC 125V or 250V MIN. 5A
<b>SW2</b>	DC 20V 10mA
<b>SW1</b>	RO=10~200Ω(MIN. 1/4W) CO =0.1~0.2μF (AC 200 or 400WV)
<b>SW1</b>	4.7Ω~6.8Ω MIN. 10W

- Exchange blue and red wire of the motor for CCW direction.
- When change from run to stop, electric brake operates about 0.5 second and motor stops rapidly.

### Bi-directional operation + Variable speed



**SW1** AC 125V or 250V  
**SW3** MIN. 5A

- Set stop period and switch SW2 after the motor completely stop.

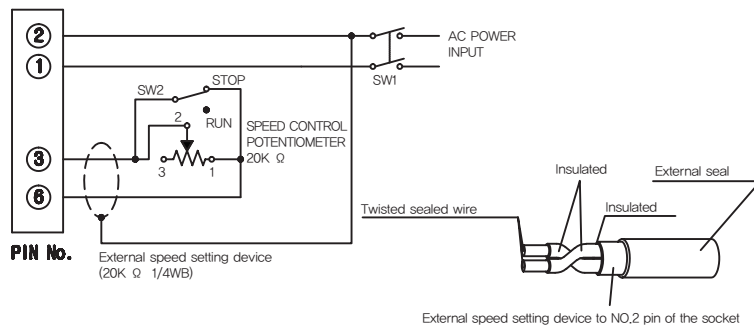
# B AC Motors

## Speed Controller DSKM

### Applied Electrical Wiring

#### How to use external volume

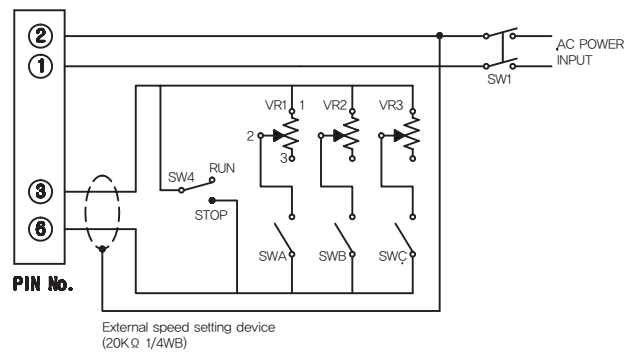
- Long distance control



#### Caution

- Set internal volume "Zero" when using external volume
- Shorten the connection cable as much as possible.
- In case of malfunction, use twist shield cable.

- Multi-stage speed setting



#### Caution

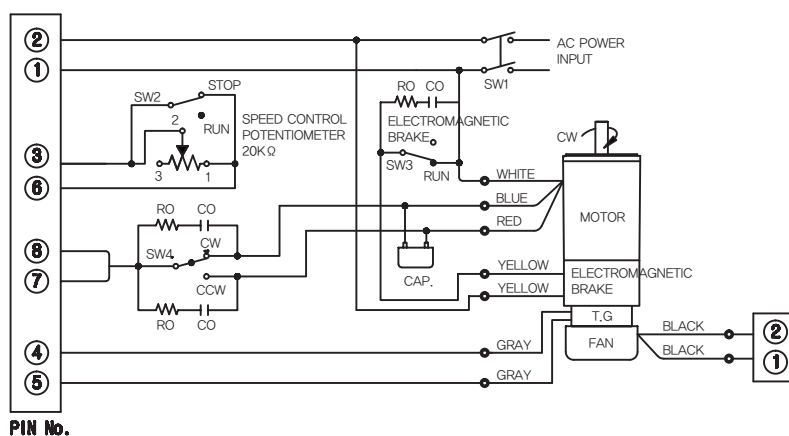
- Set the volume to 'Zero'.
- Set a speed repeatedly through the external volume, VR1, VR2 and VR3 by switching SWA, SWB and SWC.

SW4

DC 20V 10mA

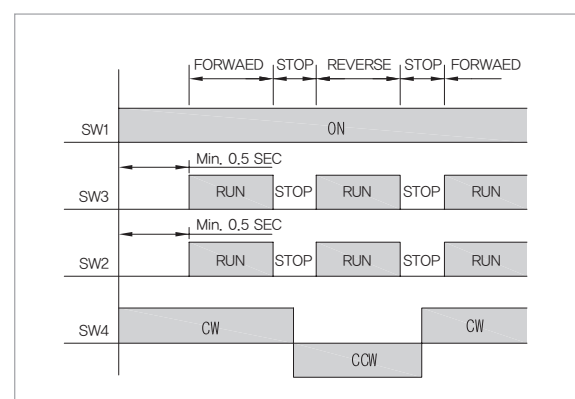
### Wiring Diagram for Brake Motor

#### When electric brake of controller is not used



#### Caution

- Switch SW4 after the motor completely stops.
- Input time for power switch SW1 should be about 0.5 seconds faster than the signal of start operating of SW2 and SW3.
- When run/stop, operate with SW2 and SW3 while SW1 is ON.
- Set internal volume "Zero" when using external volume.



SW1  
1,3,4

AC 125V or 250V Min. 5A

SW2

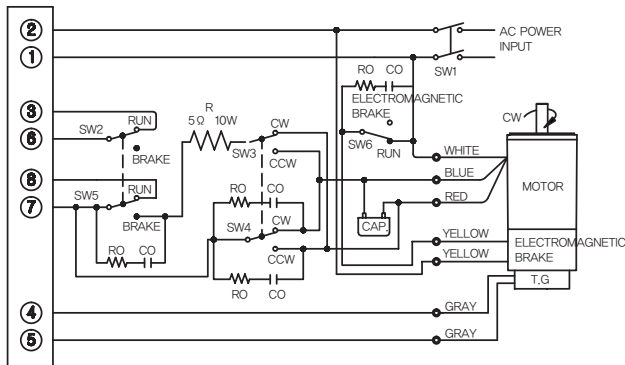
DC 20V 10mA

RO  
CO

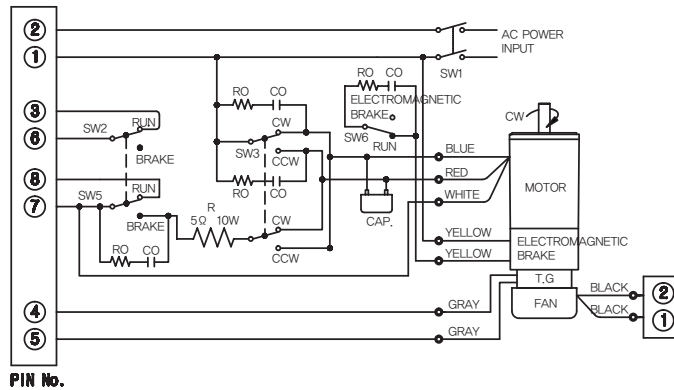
RO=10~200Ω (Min. 1/4W)  
CO =0.1~0.2μF (AC 200 or 400V)

☐ When electric brake of controller is used

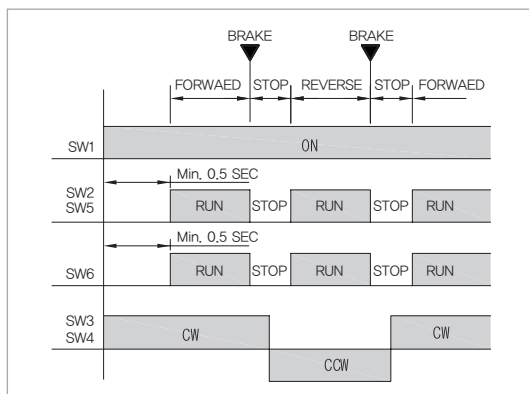
- Motor 25W or less



- Motors 40W~180W



PIN No.

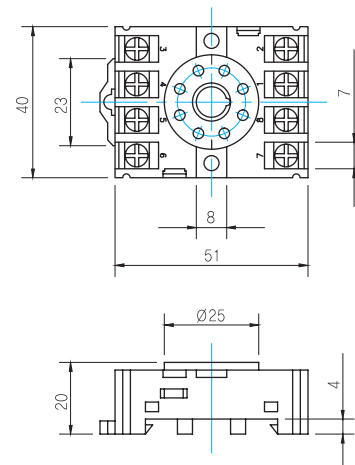
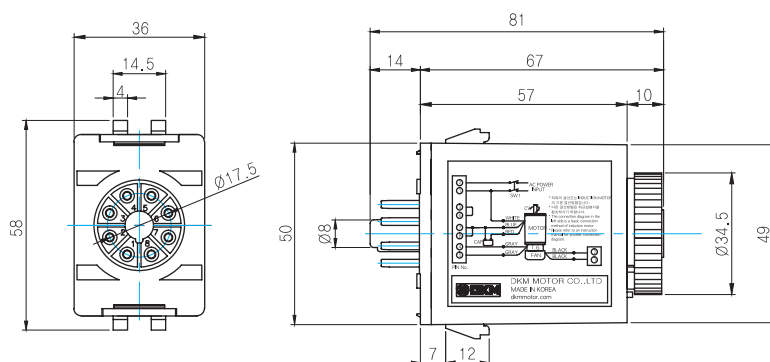


SW1 1,3,4,5,6	AC 125V or 250V Min. 5A
SW2	DC 20V 10mA
RO CO	RO=10~200Ω (Min. 1/4W) CO =0.1~0.2μF (AC 200 or 400WV)
R	4.7Ω ~ 6.8Ω Min. 10W

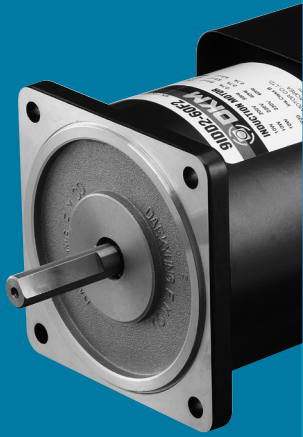
**Caution**

- When changed from run to stop, electromagnetic brake operates and motor stops rapidly.
- Operate SW3 and SW4 after the motor stops.
- Changing the period of SW3 and SW4 should be done quicker than starting signals of SW2, SW5, and SW6.
- Power input time for SW1 should be at least 0.5 seconds faster than starting signals of SW2, SW5 and SW6.
- When Run/Stop, operate with SW2, SW5 and SW6 while SW1 in ON.

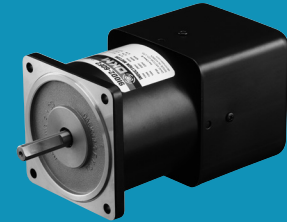
☉ **Dimensions**







# Speed Control Induction Motor



## Index

Speed Control Induction Motor 6W (□ 60mm)	B-225
Speed Control Induction Motor 6W (□ 70mm)	B-227
Speed Control Induction Motor 10W (□ 70mm)	B-229
Speed Control Induction Motor 15W (□ 70mm)	B-231
Speed Control Induction Motor 15W (□ 80mm)	B-233
Speed Control Induction Motor 25W (□ 80mm)	B-236
Speed Control Induction Motor 40W (□ 90mm)	B-239
Speed Control Induction Motor 60W (□ 90mm)	B-242
Speed Control Induction Motor 90W (□ 90mm)	B-246
Speed Control Induction Motor 120W (□ 90mm)	B-250
Speed Control Induction Motor 180W (□ 90mm)	B-254



# B AC Motors

S.C. Induction Motor 6W (□ 60mm)

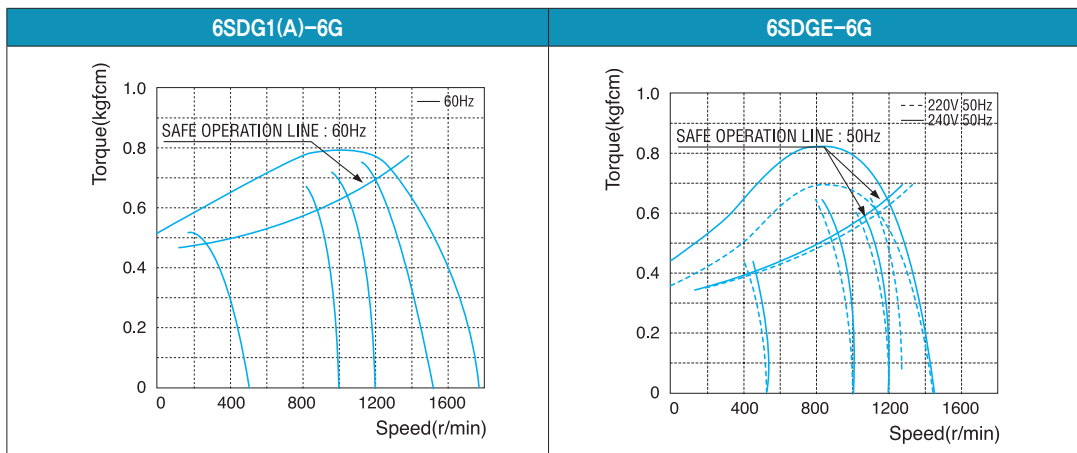
## 6W Speed Control Induction Motor 6W(□ 60mm)

### Motor Specification

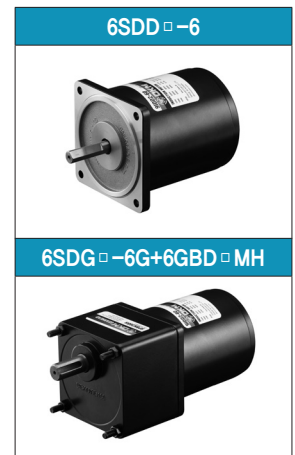
Model 6SDG*-6G: Gear Type Shaft 6SDD*-6: D-Cut Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque		Permissible Torque				Capacitor μF / VAC
							kgfcm	N.m	1200r/min		90r/min		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
6SDG1(A)-6G	6	1∅110	60	4	Cont.	90-1700	0.35	0.035	0.55	0.055	0.35	0.035	2.5 / 250
6SDG2(D)-6G	6	1∅220	60	4	Cont.	90-1700	0.39	0.039	0.55	0.055	0.40	0.040	0.7 / 450
6SDGE-6G	6	1∅220	50	4	Cont.	90-1400	0.30	0.030	0.45	0.045	0.30	0.030	0.7 / 450
		1∅240					0.35	0.035	0.50	0.050	0.30	0.030	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.
- 4) Impedance Protected Type

### Speed-Torque Characteristics



### Motor Images



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

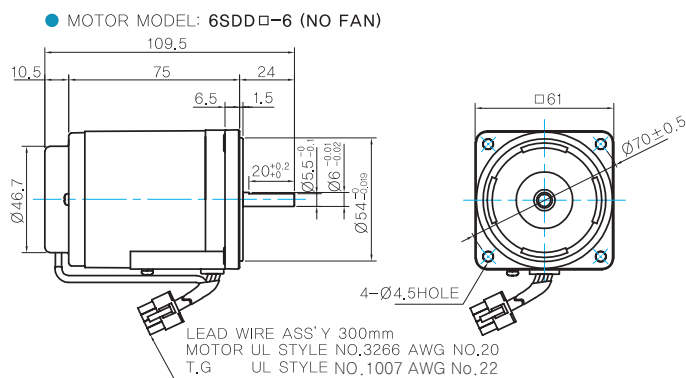
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
6SDG*-6G	6GBD □ MH	1200	110	60	kgfcm	1.3	1.6	2.2	2.7	3.3	4.0	4.5	5.6	6.7	8.0	8.0	10.0
					N.m	0.13	0.16	0.22	0.26	0.33	0.39	0.44	0.55	0.65	0.79	0.79	0.98
			220	60	kgfcm	1.3	1.6	2.2	2.7	3.3	4.0	4.5	5.6	6.7	8.0	8.0	10.0
				N.m	0.13	0.16	0.22	0.26	0.33	0.39	0.44	0.55	0.65	0.79	0.79	0.98	
		220/240	50	kgfcm	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	
				N.m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.72	0.89	
		90	110	60	kgfcm	0.9	1.0	1.4	1.7	2.1	2.6	2.8	3.5	4.3	5.1	5.1	6.4
					N.m	0.08	0.10	0.14	0.17	0.21	0.25	0.28	0.35	0.42	0.50	0.50	0.63
			220	60	kgfcm	1.0	1.2	1.6	1.9	2.4	2.9	3.2	4.1	4.9	5.8	5.8	7.3
				N.m	0.10	0.11	0.16	0.19	0.24	0.29	0.32	0.40	0.48	0.57	0.57	0.72	
		220/240	50	kgfcm	0.7	0.9	1.2	1.5	1.8	2.2	2.4	3.0	3.6	4.4	4.4	5.5	
				N.m	0.07	0.09	0.12	0.14	0.18	0.21	0.24	0.30	0.36	0.43	0.43	0.54	

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200	250			
6SDG* 6G	6GBD□MH	1200	110	60	kgfcm	12.0	14.5	16.1	18.2	21.8	27.2	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		
					N,m	1.18	1.42	1.57	1.78	2.13	2.67	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	
			220/ 240	50	kgfcm	11.0	13.1	14.6	16.5	19.8	24.8	29.7	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
		N,m			1.07	1.29	1.43	1.62	1.94	2.43	2.91	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	
		90	110	60	kgfcm	7.7	9.2	10.2	11.6	13.9	17.3	20.8	23.1	27.7	30.0	30.0	30.0	30.0	30.0	30.0	30.0
					N,m	0.75	0.90	1.00	1.13	1.36	1.70	2.04	2.26	2.72	2.94	2.94	2.94	2.94	2.94	2.94	2.94
220/ 240	50		kgfcm	6.6	7.9	8.8	9.9	11.9	14.9	17.8	19.8	23.8	29.7	30.0	30.0	30.0	30.0	30.0	30.0		
		N,m	0.64	0.77	0.86	0.97	1.16	1.46	1.75	1.94	2.33	2.91	2.94	2.94	2.94	2.94	2.94	2.94			

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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

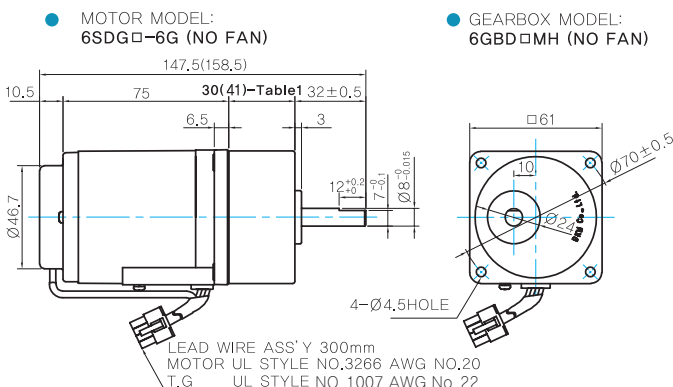


### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

#### G TYPE GEARBOX



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### WEIGHT

	PART	WEIGHT(Kg)
GEAR BOX	MOTOR	0.75
	6GBD3MH ~ 6GBD18MH	0.3
	6GBD20MH ~ 6GBD40MH	0.32
	6GBD50MH ~ 6GBD250MH	0.34

#### 30(41)-Table1

SIZE(mm)	GEAR RATIO
30	6GBD3MH - 6GBD18MH
41	6GBD25MH - 6GBD180MH

# B AC Motors

S.C. Induction Motor 6W (□ 70mm)

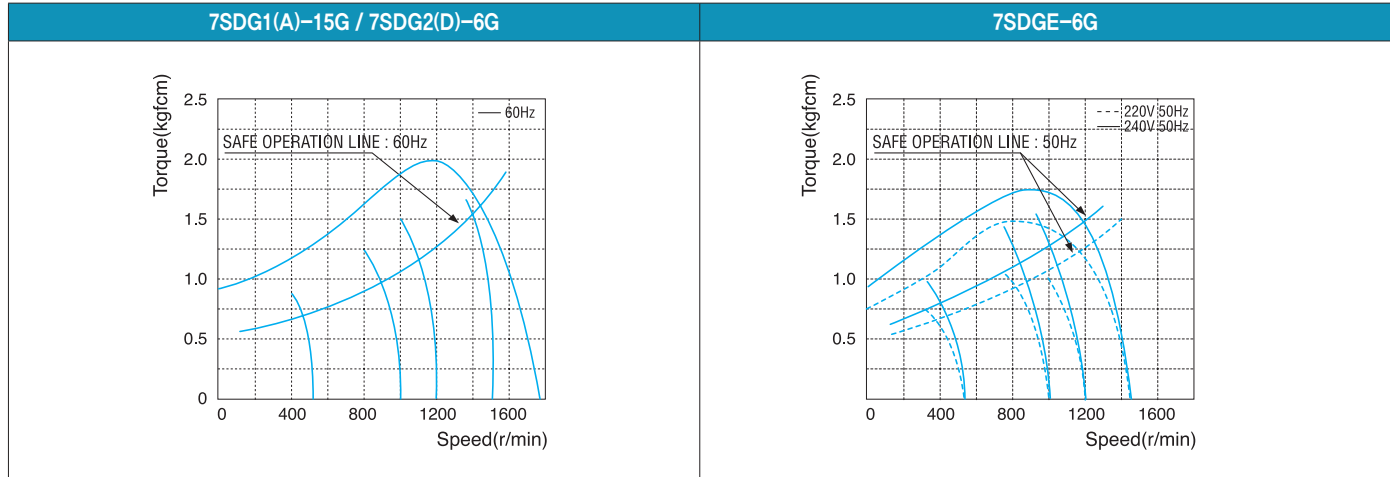
**6W** Speed Control Induction Motor 6W(□ 70mm)

## Motor Specification

Model 7SDG*-6G: Gear Type Shaft 7SDD*-6: D-Cut Type Shaft Lead Wire Type	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	
7SDG1(A)-6G	6	1 φ 110	60	4	Cont.	90-1700	0.35	0.035	0.53	0.053	0.35	0.035	2.5 / 250
7SDG2(D)-6G	6	1 φ 220	60	4	Cont.	90-1700	0.39	0.039	0.55	0.055	0.35	0.035	0.7 / 450
7SDGE-6G	6	1 φ 220	50	4	Cont.	90-1400	0.30	0.030	0.45	0.045	0.30	0.030	0.7 / 450
		1 φ 240					0.35	0.035	0.50	0.050	0.30	0.030	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Speed-Torque Characteristics



## 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	10	12.5	15	18	20	25
7SDG*-6G	7GBK □ BMH	1200	110	60	kgfcm	1.3	1.5	2.1	2.6	3.2	3.9	4.3	5.4	6.4	7.7	7.7	9.7
					N.m	0.13	0.15	0.21	0.25	0.32	0.38	0.42	0.53	0.63	0.76	0.76	0.95
			220	60	kgfcm	1.3	1.6	2.2	2.7	3.3	4.0	4.5	5.6	6.7	8.0	8.0	10.0
					N.m	0.13	0.16	0.22	0.26	0.33	0.39	0.44	0.55	0.65	0.79	0.79	0.98
			220/240	50	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2
					N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80
		90	110	60	kgfcm	0.9	1.0	1.4	1.7	2.1	2.6	2.8	3.5	4.3	5.1	5.1	6.4
					N.m	0.08	0.10	0.14	0.17	0.21	0.25	0.28	0.35	0.42	0.50	0.50	0.63
			220	60	kgfcm	0.9	1.0	1.4	1.7	2.1	2.6	2.8	3.5	4.3	5.1	5.1	6.4
					N.m	0.08	0.10	0.14	0.17	0.21	0.25	0.28	0.35	0.42	0.50	0.50	0.63
			220/240	50	kgfcm	0.7	0.9	1.2	1.5	1.8	2.2	2.4	3.0	3.6	4.4	4.4	5.5
					N.m	0.07	0.09	0.12	0.14	0.18	0.21	0.24	0.30	0.36	0.43	0.43	0.54

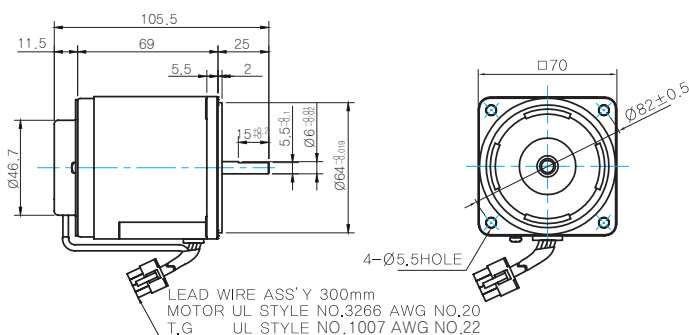
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200
7SDG* -6G	7GBK □ BMH	1200	110	60	kgfcm	11.6	13.9	15.5	17.5	21.0	26.2	31.5	35.0	42.0	50.0	50.0	50.0
					N.m	1.14	1.36	1.52	1.71	2.06	2.57	3.09	3.43	4.11	4.90	4.90	4.90
			220	60	kgfcm	12.0	14.5	16.1	18.2	21.8	27.2	32.7	36.3	43.6	50.0	50.0	50.0
		N.m			1.18	1.42	1.57	1.78	2.13	2.67	3.20	3.56	4.27	4.90	4.90	4.90	
		220/ 240	50	kgfcm	9.9	11.8	13.1	14.9	17.8	22.3	26.7	29.7	35.6	44.6	50.0	50.0	
				N.m	0.97	1.16	1.29	1.46	1.75	2.18	2.62	2.91	3.49	4.37	4.90	4.90	
				90	110	60	kgfcm	7.7	9.2	10.2	11.6	13.9	17.3	20.8	23.1	27.7	34.7
		N.m	0.75				0.90	1.00	1.13	1.36	1.70	2.04	2.26	2.72	3.40	4.07	4.53
		220	60		kgfcm	7.7	9.2	10.2	11.6	13.9	17.3	20.8	23.1	27.7	34.7	41.6	46.2
N.m	0.75			0.90	1.00	1.13	1.36	1.70	2.04	2.26	2.72	3.40	4.07	4.53			
220/ 240	50	kgfcm	6.6	7.9	8.8	9.9	11.9	14.9	17.8	19.8	23.8	29.7	35.6	39.6			
		N.m	0.64	0.77	0.86	0.97	1.16	1.46	1.75	1.94	2.33	2.91	3.49	3.88			

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

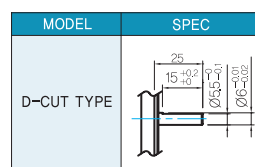
## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 7SDD □-6 (NO FAN)



- MOTOR OUTPUT SHAFT

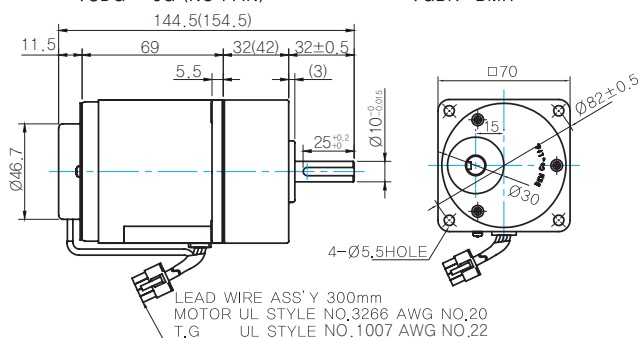


### GEARED MOTOR

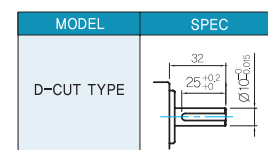
### G TYPE GEARBOX

- MOTOR MODEL: 7SDG □-6G (NO FAN)

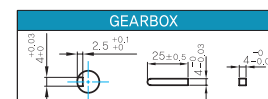
- GEARBOX MODEL: 7GBK □BMH



- GEARBOX OUTPUT SHAFT



- KEY SPEC



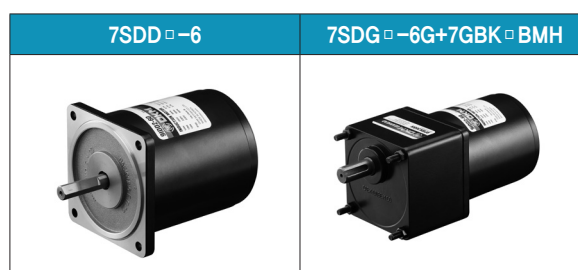
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	0.93
7GBK3BMH - 7GBK18BMH	0.38
7GBK20BMH - 7GBK40BMH	0.48
7GBK50BMH - 7GBK200BMH	0.53

- 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

## Motor Images



# B AC Motors

S.C. Induction Motor 10W (□ 70mm)

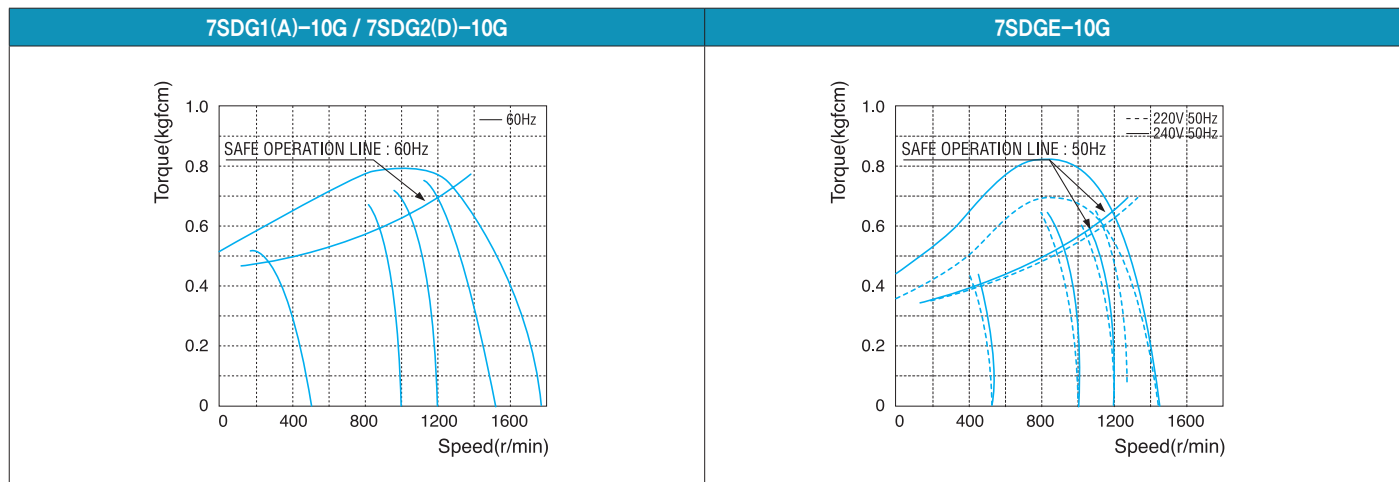
## 10W Speed Control Induction Motor 10W(□ 70mm)

### Motor Specification

Model 7SDG□-10G: Gear Type Shaft 7SDD□-10: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
7SDG1(A)-10G	10	1∅110	60	4	Cont.	90-1700	0.40	0.040	0.70	0.070	0.36	0.036	3.0 / 250
7SDG2(D)-10G	10	1∅220	60	4	Cont.	90-1700	0.45	0.045	0.70	0.070	0.36	0.036	1.0 / 450
7SDGE-10G	10	1∅220	50	4	Cont.	90-1400	0.40	0.040	0.60	0.060	0.35	0.035	1.0 / 450
		0.45					0.045	0.80	0.080	0.36	0.036		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

### Speed-Torque Characteristics



### 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	10	12.5	15	18	20	25
7SDG*-10G	7GBK □ BMH	1200	110	60	kgfcm N.m	1.7 0.17	2.0 0.20	2.8 0.28	3.4 0.33	4.3 0.42	5.1 0.50	5.7 0.56	7.1 0.69	8.5 0.83	10.2 1.00	10.2 1.00	12.8 1.25
			220	60	kgfcm N.m	1.7 0.17	2.0 0.20	2.8 0.28	3.4 0.33	4.3 0.42	5.1 0.50	5.7 0.56	7.1 0.69	8.5 0.83	10.2 1.00	10.2 1.00	12.8 1.25
			220/ 240	50	kgfcm N.m	1.5 0.14	1.7 0.17	2.4 0.24	2.9 0.29	3.6 0.36	4.4 0.43	4.9 0.48	6.1 0.60	7.3 0.71	8.7 0.86	8.8 0.86	11.0 1.07
		90	110	60	kgfcm N.m	0.9 0.09	1.0 0.10	1.5 0.14	1.7 0.17	2.2 0.21	2.6 0.26	2.9 0.29	3.6 0.36	4.4 0.43	5.2 0.51	5.3 0.51	6.6 0.64
			220	60	kgfcm N.m	0.9 0.09	1.0 0.10	1.5 0.14	1.7 0.17	2.2 0.21	2.6 0.26	2.9 0.29	3.6 0.36	4.4 0.43	5.2 0.51	5.3 0.51	6.6 0.64
			220/ 240	50	kgfcm N.m	0.9 0.08	1.0 0.10	1.4 0.14	1.7 0.17	2.1 0.21	2.6 0.25	2.8 0.28	3.5 0.35	4.3 0.42	5.1 0.50	5.1 0.50	6.4 0.63

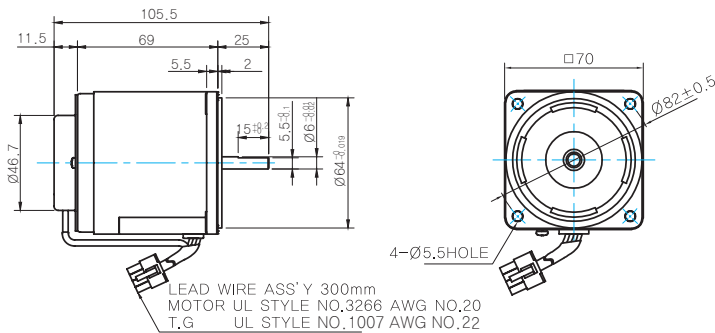
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200		
7SDG*-10G	7GBK□BMH	1200	110	60	kgfcm N.m	15.3 1.50	18.4 1.80	20.4 2.00	23.1 2.26	27.7 2.72	34.7 3.40	41.6 4.07	46.2 4.53	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90		
			220	60	kgfcm N.m	15.3 1.50	18.4 1.80	20.4 2.00	23.1 2.26	27.7 2.72	34.7 3.40	41.6 4.07	46.2 4.53	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90	
			220/ 240	50	kgfcm N.m	13.1 1.29	15.8 1.55	17.5 1.72	19.8 1.94	23.8 2.33	29.7 2.91	35.6 3.49	39.6 3.88	47.5 4.66	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90	
		90	110	60	kgfcm N.m	7.9 0.77	9.5 0.93	10.5 1.03	11.9 1.16	14.3 1.40	17.8 1.75	21.4 2.10	23.8 2.33	28.5 2.79	35.6 3.49	42.8 4.19	47.5 4.66	47.5 4.66	47.5 4.66
			220	60	kgfcm N.m	7.9 0.77	9.5 0.93	10.5 1.03	11.9 1.16	14.3 1.40	17.8 1.75	21.4 2.10	23.8 2.33	28.5 2.79	35.6 3.49	42.8 4.19	47.5 4.66	47.5 4.66	47.5 4.66
			220/ 240	50	kgfcm N.m	7.7 0.75	9.2 0.90	10.2 1.00	11.6 1.13	13.9 1.36	17.3 1.70	20.8 2.04	23.1 2.26	27.7 2.72	34.7 3.40	41.6 4.07	46.2 4.53	46.2 4.53	46.2 4.53

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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: 7SDD□-10(NO FAN)



● MOTOR OUTPUT SHAFT

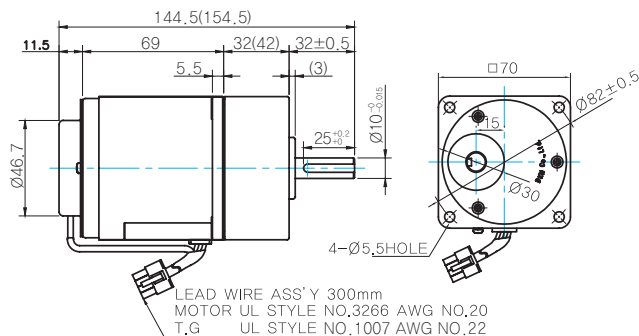
MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

#### G TYPE GEARBOX

● MOTOR MODEL:  
7SDG□-10G (NO FAN)

● GEARBOX MODEL:  
7GBK□BMH



● GEARBOX OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

● KEY SPEC

GEARBOX	

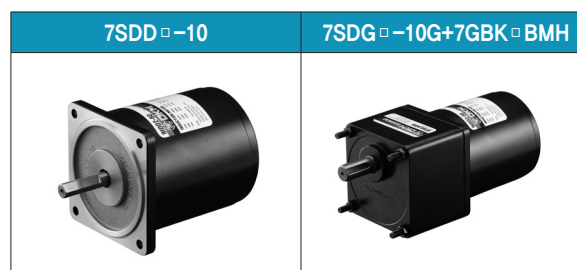
#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	0.93	
GEAR BOX	7GBK3BMH - 7GBK18BMH	0.38
	7GBK20BMH - 7GBK40BMH	0.48
	7GBK50BMH - 7GBK200BMH	0.53

● 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

## Motor Images



# B AC Motors

S.C. Induction Motor 15W (□ 70mm)

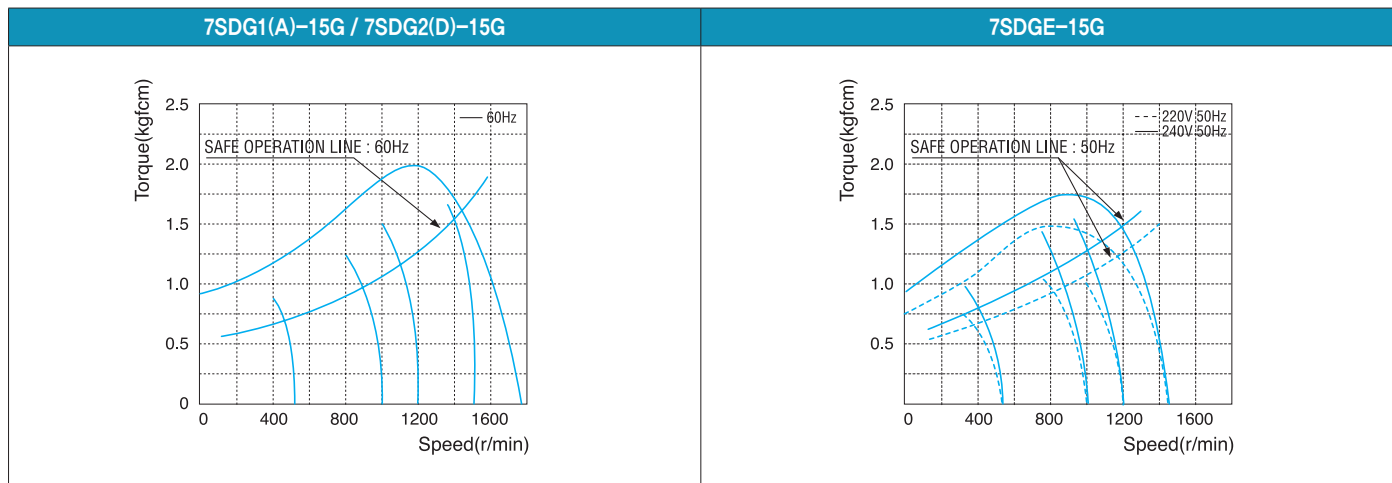
## 15W Speed Control Induction Motor 15W(□ 70mm)

### Motor Specification

Model 7SDG*-15G: Gear Type Shaft 7SDD*-15: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
7SDG1(A)-15G	15	1 ∅ 110	60	4	Cont.	90-1700	0.70	0.070	1.15	0.115	0.45	0.045	3.5 / 250
7SDG2(D)-15G	15	1 ∅ 220	60	4	Cont.	90-1700	0.70	0.070	1.15	0.115	0.45	0.045	1.2 / 450
7SDGE-15G	15	1 ∅ 220	50	4	Cont.	90-1400	0.65	0.065	1.05	0.105	0.43	0.043	1.2 / 450
		1 ∅ 240							1.25	0.125	0.45	0.045	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

### Speed-Torque Characteristics



### 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	10	12.5	15	18	20	25
7SDG*-15G	7GBK □ BMH	1200	110	60	kgfcm	2.8	3.4	4.7	5.6	7.0	8.4	9.3	11.6	14.0	16.8	16.8	21.0
					N.m	0.27	0.33	0.46	0.55	0.68	0.82	0.91	1.14	1.37	1.64	1.65	2.06
			220/240	50	kgfcm	2.6	3.1	4.3	5.1	6.4	7.7	8.5	10.6	12.8	15.3	15.3	19.2
		N.m	0.25	0.30	0.42	0.50	0.63	0.75	0.83	1.04	1.25	1.50	1.50	1.88			
		90	110	60	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2
					N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80
220	60		kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2		
N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80					
220/240	50	kgfcm	1.0	1.3	1.7	2.1	2.6	3.1	3.5	4.4	5.2	6.3	6.3	7.8			
N.m	0.10	0.12	0.17	0.20	0.26	0.31	0.34	0.43	0.51	0.61	0.62	0.77					

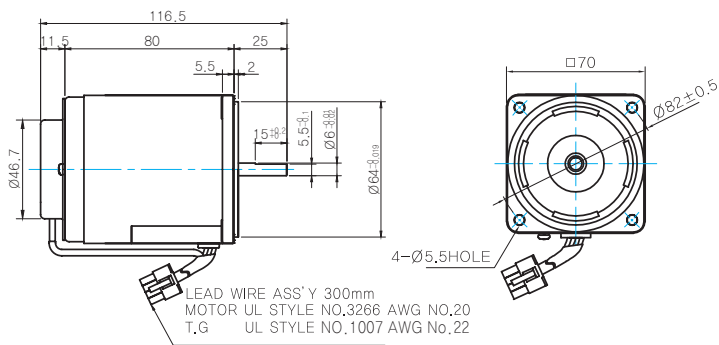
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200
7SDG* -15G	7GBK□ BMH	1200	110	60	kgfcm	25.2	30.2	33.6	38.0	45.5	50.0	50.0	50.0	50.0	50.0	50.0	50.0
					N.m	2.47	2.96	3.29	3.72	4.46	4.90	4.90	4.90	4.90	4.90	4.90	
			220	60	kgfcm	25.2	30.2	33.6	38.0	45.5	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		220/240	50	N.m	2.47	2.96	3.29	3.72	4.46	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90
		90	110	60	kgfcm	9.9	11.8	13.1	14.9	17.8	22.3	26.7	29.7	35.6	44.6	50.0	50.0
					N.m	0.97	1.16	1.29	1.46	1.75	2.18	2.62	2.91	3.49	4.37	4.90	4.90
220	60		kgfcm	9.9	11.8	13.1	14.9	17.8	22.3	26.7	29.7	35.6	44.6	50.0	50.0		
220/240	50	N.m	0.97	1.16	1.29	1.46	1.75	2.18	2.62	2.91	3.49	4.37	4.90	4.90			
220/240	50	kgfcm	9.4	11.3	12.6	14.2	17.0	21.3	25.5	28.4	34.1	42.6	50.0	50.0			
N.m	0.92	1.11	1.23	1.39	1.67	2.09	2.50	2.78	3.34	4.17	4.90	4.90					

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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: 7SDD□-15 (NO FAN)



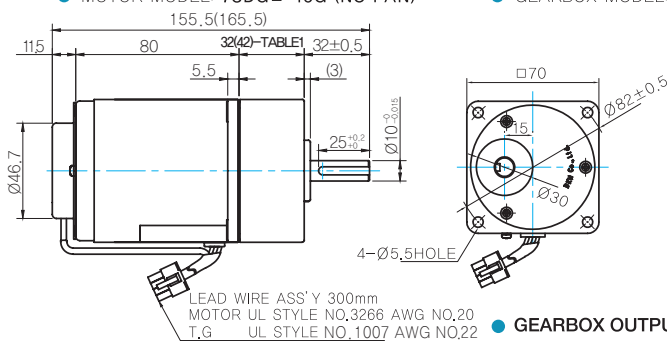
### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL: 7SDG□-15G (NO FAN)
- GEARBOX MODEL: 7GBK□BMH



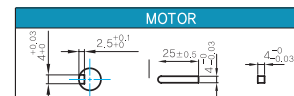
### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### WEIGHT

PART	WEIGHT(Kg)
MOTOR	1.20
GEAR BOX	0.38
7GBK3BMH ~ 7GBK18BMH	
7GBK20BMH ~ 7GBK40BMH	0.48
7GBK50BMH ~ 7GBK200MH	0.53

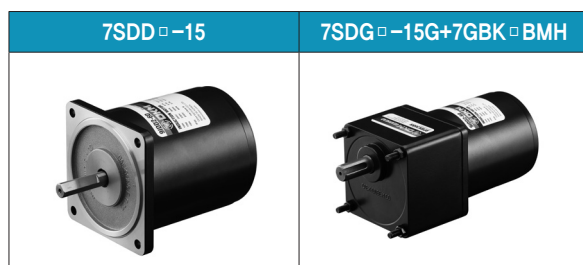
### KEY SPEC



### 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

## Motor Images





# B AC Motors

S.C. Induction Motor 15W (□ 80mm)

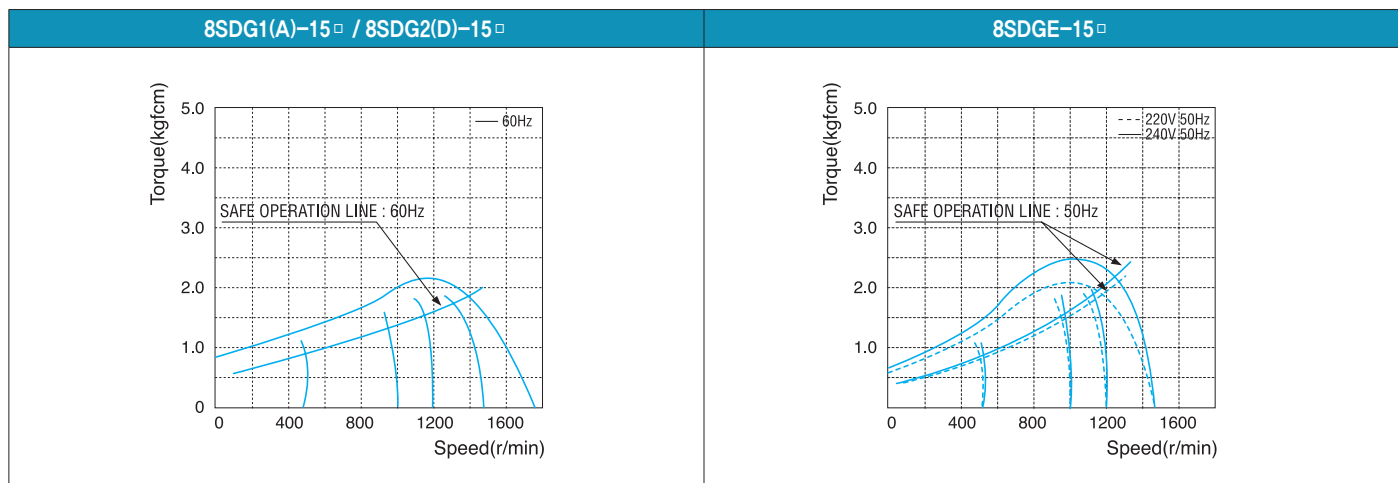
## 15W Speed Control Induction Motor 15W(□ 80mm)

### Motor Specification

Model 8SDG*–15□: Gear Type Shaft 8SDD*–15: D–Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
8SDG1(A)–15□	15	1 φ110	60	4	Cont.	90–1700	0.70	0.070	1.50	0.150	0.45	0.045	3.5 / 250
8SDG2(D)–15□	15	1 φ220	60	4	Cont.	90–1700	0.70	0.070	1.50	0.150	0.45	0.045	1.2 / 450
8SDGE–15□	15	1 φ220	50	4	Cont.	90–1400	0.65	0.065	1.20	0.120	0.43	0.043	1.2 / 450
		0.70					0.070	1.40	0.140	0.45	0.045		

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D–Cut Type Shaft is for using the motor only.

### Speed–Torque Characteristics



### 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	10	12.5	15	18	20	25	30	36
8SDG*–15G	8GBK □ BMH	1200	110	60	kgfcm	3.6	4.4	6.1	7.3	9.1	10.9	12.2	15.2	18.2	21.9	21.9	27.4	32.9	39.4
					N.m	0.36	0.43	0.60	0.71	0.89	1.07	1.19	1.49	1.79	2.14	2.15	2.68	3.22	3.86
			220	60	kgfcm	3.6	4.4	6.1	7.3	9.1	10.9	12.2	15.2	18.2	21.9	21.9	27.4	32.9	39.4
					N.m	0.36	0.43	0.60	0.71	0.89	1.07	1.19	1.49	1.79	2.14	2.15	2.68	3.22	3.86
			220/ 240	50	kgfcm	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8
					N.m	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61
		90	110	60	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2	9.9	11.8
					N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80	0.97	1.16
			220	60	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2	9.9	11.8
					N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80	0.97	1.16
			220/ 240	50	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2	9.9	11.8
					N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80	0.97	1.16



# B AC Motors

S.C. Induction Motor 15W (□ 80mm)

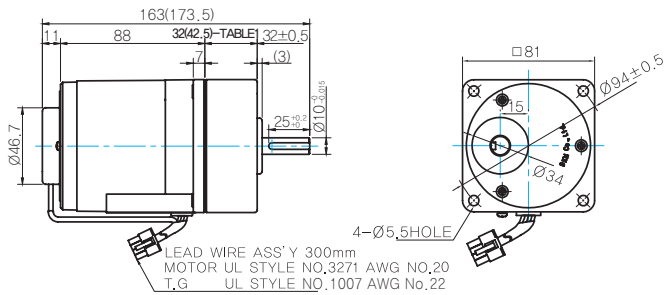
## Dimensions

### GEARED MOTOR

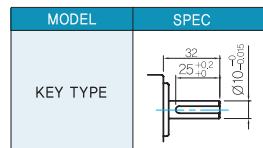
#### G TYPE GEARBOX

MOTOR MODEL: 8SDG□-15G (NO FAN)

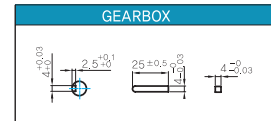
GEARBOX MODEL: 8GBK□BMH



GEARBOX OUTPUT SHAFT



KEY SPEC



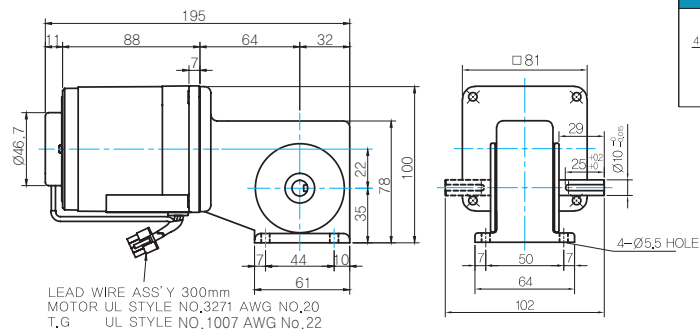
32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

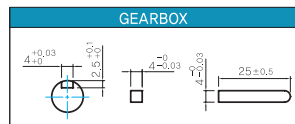
#### W TYPE GEARBOX

MOTOR MODEL: 8SDG□-15W (NO FAN)

GEARBOX MODEL: 8WD□BL/BR/BRL



KEY SPEC



#### WEIGHT

PART	WEIGHT(kg)
MOTOR	1.66
8GBK3BMH ~ 8GBK18BMH	0.56
8GBK20BMH ~ 8GBK40BMH	0.65
8GBK50BMH ~ 8GBK360BMH	0.72
8WD□BL/BR/BRL	0.68
8XD10□□	0.45

## Motor Images



# 25W

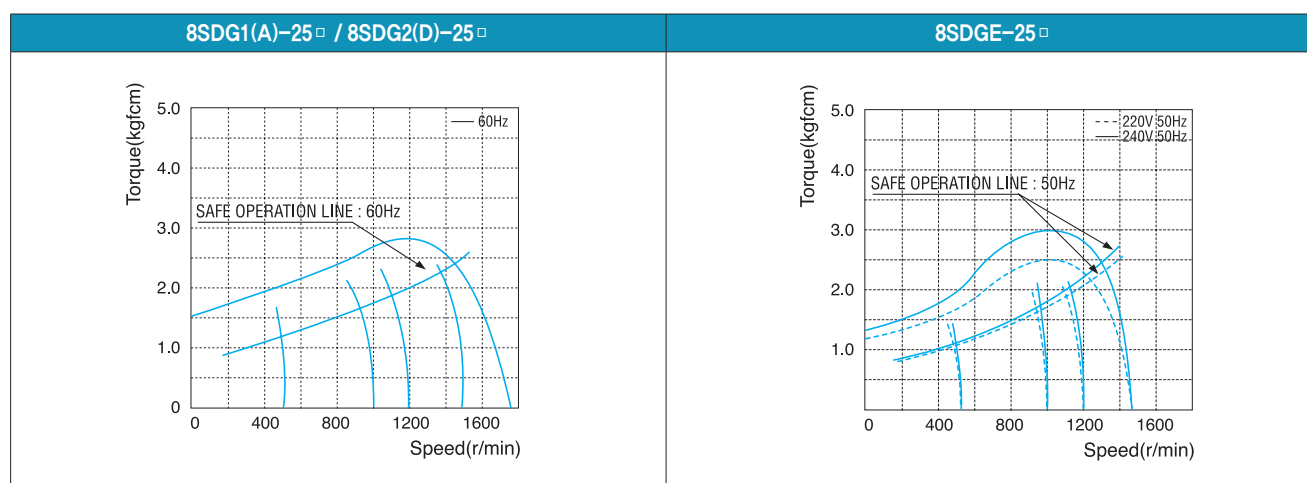
Speed Control Induction Motor 25W(□ 80mm)

## Motor Specification

Model 8SDG*-25 □ : Gear Type Shaft 8SDD*-25: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
8SDG1(A)-25 □	25	1 ∅110	60	4	Cont.	90-1700	1.00	0.100	1.70	0.170	0.60	0.060	6.0 / 250
8SDG2(D)-25 □	25	1 ∅220	60	4	Cont.	90-1700	1.00	0.100	1.80	0.180	0.60	0.060	1.5 / 450
8SDGE-25 □	25	1 ∅220	50	4	Cont.	90-1400	0.80	0.080	1.50	0.150	0.50	0.050	1.5 / 450
		1 ∅240					1.00	0.100	1.80	0.180	0.52	0.052	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Speed-Torque Characteristics



## 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	10	12.5	15	18	20	25	30	36
8SDG*-25G	8GBK □ BMH	1200	110	60	kgfcm	4.1	5.0	6.9	8.3	10.3	12.4	13.8	17.2	20.7	24.8	24.8	31.0	37.2	44.7
					N.m	0.40	0.49	0.67	0.81	1.01	1.21	1.35	1.69	2.02	2.43	2.43	3.04	3.65	4.38
			220	60	kgfcm	4.4	5.2	7.3	8.7	10.9	13.1	14.6	18.2	21.9	26.2	26.3	32.9	39.4	47.3
					N.m	0.43	0.51	0.71	0.86	1.07	1.29	1.43	1.79	2.14	2.57	2.58	3.22	3.86	4.64
			220/240	50	kgfcm	4.4	5.2	7.3	8.7	10.9	13.1	14.6	18.2	21.9	26.2	26.3	32.9	39.4	47.3
					N.m	0.43	0.51	0.71	0.86	1.07	1.29	1.43	1.79	2.14	2.57	2.58	3.22	3.86	4.64
		90	110	60	kgfcm	1.5	1.7	2.4	2.9	3.6	4.4	4.9	6.1	7.3	8.7	8.8	11.0	13.1	15.8
					N.m	0.14	0.17	0.24	0.29	0.36	0.43	0.48	0.60	0.71	0.86	0.86	1.07	1.29	1.55
			220	60	kgfcm	1.5	1.7	2.4	2.9	3.6	4.4	4.9	6.1	7.3	8.7	8.8	11.0	13.1	15.8
					N.m	0.14	0.17	0.24	0.29	0.36	0.43	0.48	0.60	0.71	0.86	0.86	1.07	1.29	1.55
			220/240	50	kgfcm	1.3	1.5	2.1	2.5	3.2	3.8	4.2	5.3	6.3	7.6	7.6	9.5	11.4	13.7
					N.m	0.12	0.15	0.21	0.25	0.31	0.37	0.41	0.52	0.62	0.74	0.74	0.93	1.12	1.34

# B AC Motors

## S.C. Induction Motor 25W (□ 80mm)

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	40	50	60	75	90	100	120	150	180	200	250	300	360			
8SDG* -25G	8GBK □ BMH	1200	110	60	kgfcm	49.6	56.1	67.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0		
					N.m	4.86	5.50	6.60	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
			220/240	50	kgfcm	52.6	59.4	71.3	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			5.15	5.82	6.99	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	17.5	19.8	23.8	29.7	35.6	39.6	47.5	59.4	71.3	79.2	80.0	80.0	80.0	80.0	80.0	80.0
					N.m	1.72	1.94	2.33	2.91	3.49	3.88	4.66	5.82	6.99	7.76	7.84	7.84	7.84	7.84	7.84	7.84
220/240	50		kgfcm	17.5	19.8	23.8	29.7	35.6	39.6	47.5	59.4	71.3	79.2	80.0	80.0	80.0	80.0	80.0	80.0		
		N.m	1.72	1.94	2.33	2.91	3.49	3.88	4.66	5.82	6.99	7.76	7.84	7.84	7.84	7.84	7.84	7.84			

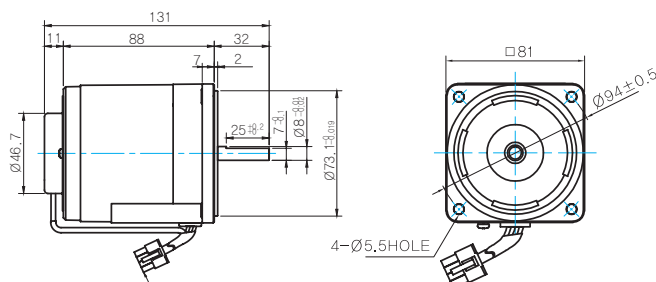
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
8SDG* -25W	8WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm	13.9	16.3	19.6	22.6	29.8	33.7	39.2	51.0	56.1
					N.m	1.37	1.60	1.92	2.22	2.92	3.30	3.84	5.00	5.50
			220/240	50	kgfcm	14.9	17.9	22.4	26.9	37.4	44.8	53.8	74.7	81.6
		N.m			1.46	1.76	2.20	2.64	3.66	4.39	5.27	7.32	8.00	
		90	110	60	kgfcm	4.9	5.8	6.9	8.0	10.5	11.9	13.8	18.0	19.8
					N.m	0.48	0.56	0.68	0.78	1.03	1.16	1.35	1.76	1.94
			220/240	50	kgfcm	4.9	5.8	6.9	8.0	10.5	11.9	13.8	18.0	19.8
		N.m			0.48	0.56	0.68	0.78	1.03	1.16	1.35	1.76	1.94	

1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.  
 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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: 8SDD□-25 (NO FAN)



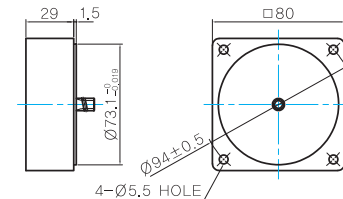
LEAD WIRE ASS Y 300mm  
 MOTOR UL STYLE NO.3271 AWG No.20  
 T,G UL STYLE NO.1007 AWG No.22

### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### INTER-DECIMAL GEARBOX

● MODEL: 8XD10□□

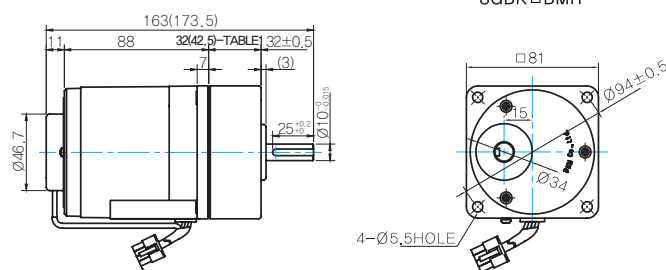


## GEARED MOTOR

### G TYPE GEARBOX

● MOTOR MODEL: 8SDG□-25G (NO FAN)

● GEARBOX MODEL: 8GBK □ BMH



LEAD WIRE ASS Y 300mm  
 MOTOR UL STYLE NO.3271 AWG No.20  
 T,G UL STYLE NO.1007 AWG No.22

### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

GEARBOX	

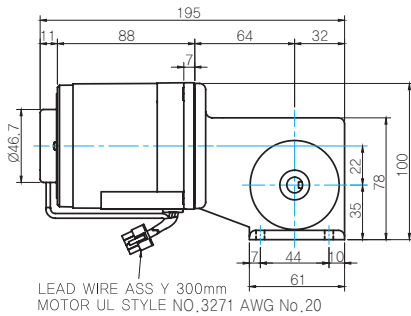
### 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

## Dimensions

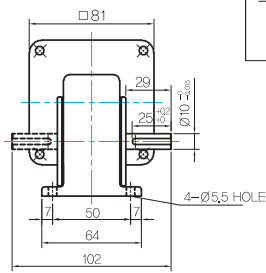
### W TYPE GEARBOX

- MOTOR MODEL:  
8SDG□-25G (NO FAN)

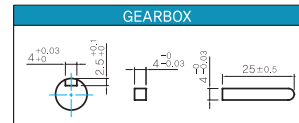


LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO. 3271 AWG No. 20  
T,G UL STYLE NO. 1007 AWG No. 22

- GEARBOX MODEL:  
8WD□BL/BR/BRL



- KEY SPEC



### WEIGHT

PART		WEIGHT(Kg)
MOTOR		1.66
GEAR BOX	8GBK3BMH ~ 8GBK18BMH	0.56
	8GBK20BMH ~ 8GBK40BMH	0.65
	8GBK50BMH ~ 8GBK360BMH	0.72
	8WD□BL/BR/BRL	0.68
	8XD10□	0.45

## Motor Images



# B AC Motors

S.C. Induction Motor 40W (□ 90mm)

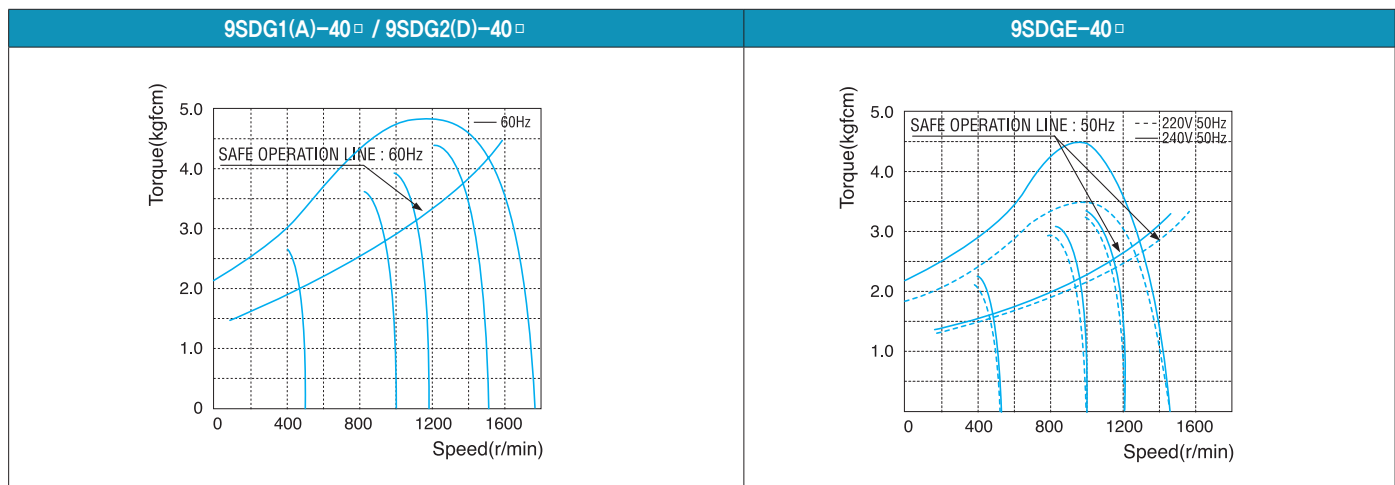
## 40W Speed Control Induction Motor 40W(□ 90mm)

### Motor Specification

Model 9SDG*-40□ : Gear Type Shaft 9SDD*-40: D-Cut Type Shaft 9SDK*-40: 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
9SDG1(A)-40□	40	1φ 110	60	4	Cont.	90-1700	1.80	0.180	2.70	0.270	0.80	0.080	10.0 / 250
9SDG2(D)-40□	40	1φ 220	60	4	Cont.	90-1700	1.80	0.180	2.70	0.270	0.80	0.080	2.5 / 450
9SDGE-40□	40	1φ 220	50	4	Cont.	90-1400	1.50	0.150	2.50	0.250	0.70	0.070	2.5 / 450
		1φ 240					1.80	0.180	3.00	0.300	0.72	0.072	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200				
9SDG*-40G	9GBK□ BMH	1200	110	60	kgfcm	4.4	6.6	7.9	10.9	13.1	16.4	19.7	21.9	27.3	32.8	39.4	39.4	49.3	59.1	71.0	78.8	89.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
					N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.68	3.21	3.86	3.86	4.83	5.79	6.95	7.73	8.73	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80
			220/240	50	kgfcm	4.1	6.1	7.3	10.1	12.2	15.2	18.2	20.3	25.3	30.4	36.5	36.5	45.6	54.8	65.7	73.0	82.5	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
					N.m	0.40	0.60	0.71	0.99	1.19	1.49	1.79	1.98	2.48	2.98	3.57	3.58	4.47	5.37	6.44	7.15	8.09	9.70	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	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.4	26.4	31.7	39.6	47.5	52.8	63.4	79.2	95.0	100.0	100.0	100.0	100.0
						N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.72	2.06	2.29	2.59	3.10	3.88	4.66	5.17	6.21	7.76	9.31	9.80	9.80	9.80	9.80
		220/240		50	kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.4	26.4	31.7	39.6	47.5	52.8	63.4	79.2	95.0	100.0	100.0	100.0	100.0	
					N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.72	2.06	2.29	2.59	3.10	3.88	4.66	5.17	6.21	7.76	9.31	9.80	9.80	9.80	9.80	
		220/240		50	kgfcm	1.1	1.7	2.0	2.8	3.4	4.3	5.1	5.7	7.1	8.5	10.2	10.2	12.8	15.3	18.4	20.4	23.1	27.7	34.7	41.6	46.2	55.4	69.3	83.2	92.4	92.4	92.4	92.4	
					N.m	0.11	0.17	0.20	0.28	0.33	0.42	0.50	0.56	0.69	0.83	1.00	1.00	1.25	1.50	1.80	2.00	2.26	2.72	3.40	4.07	4.53	5.43	6.79	8.15	9.06	9.06	9.06	9.06	





# B AC Motors

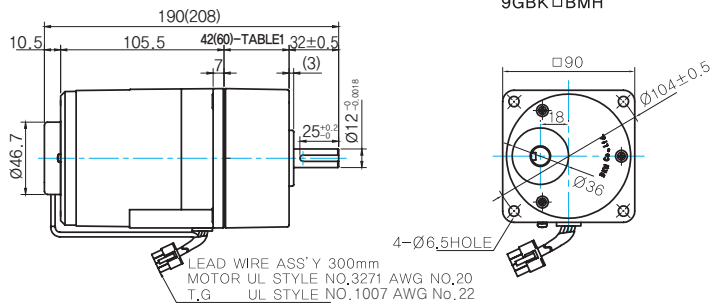
## S.C. Induction Motor 40W (□ 90mm)

### GEARED MOTOR

#### G TYPE GEARBOX

MOTOR MODEL: 9SDG□-40G (NO FAN)

GEARBOX MODEL: 9GBK□BMH



#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### KEY SPEC

GEARBOX

#### 42(60)-Table1

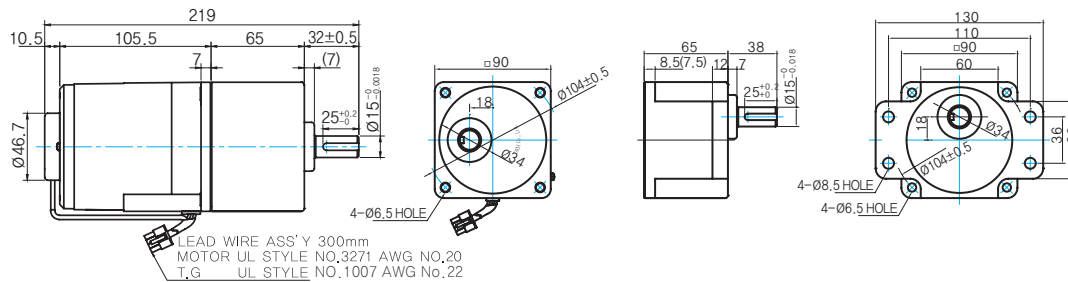
SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK18BMH
60	9GBK20BMH - 9GBK200BMH

#### P TYPE GEARBOX

MOTOR MODEL: 9SDG□-40P (NO FAN)

GEARBOX MODEL: 9PBK□BH

GEARBOX MODEL: 9PFK□BH



#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	
9PBK□BH 9PFK□BH	

#### KEY SPEC

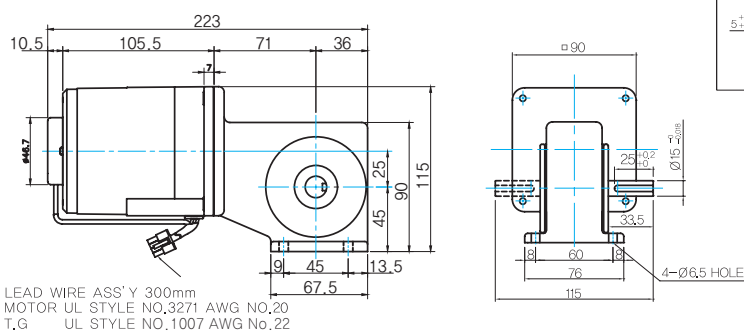
GEARBOX

#### W TYPE GEARBOX

MOTOR MODEL: 9SDG□-40W (NO FAN)

GEARBOX MODEL: 9WD□BL/BR/BRL

#### KEY SPEC

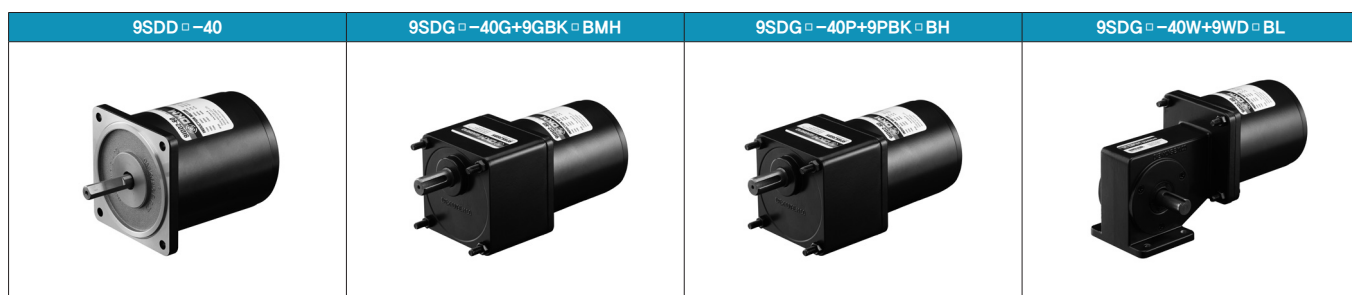


GEARBOX

#### WEIGHT

PART	WEIGHT(Kg)
MOTOR	2,55
GEAR BOX	
9GBK2BMH ~ 9GBK18BMH	0,78
9GBK20BMH ~ 9GBK40BMH	1,1
9GBK50BMH ~ 9GBK200BMH	1,2
9PB(F)K2BH ~ 9PB(F)K10BH	1,28
9PB(F)K12.5BH ~ 9PB(F)K20BH	1,3
9PB(F)K25BH ~ 9PB(F)K60BH	1,45
9PB(F)K75BH ~ 9PB(F)K200BH	1,47
9WD□BL/BR/BRL	1,0
9XD10□□	0,6

### Motor Images



# 60W

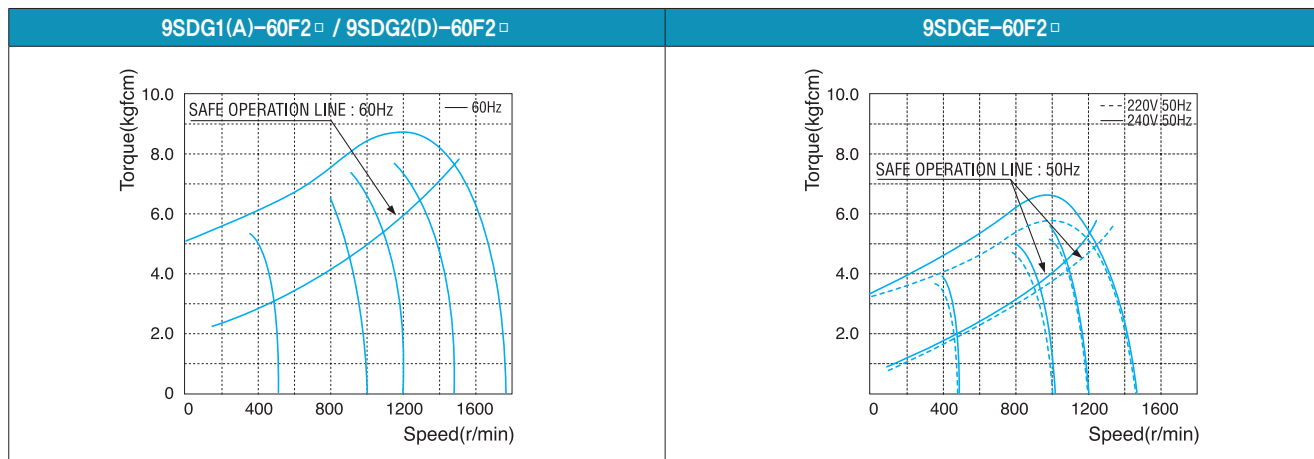
Speed Control Induction Motor 60W(□ 90mm)

## Motor Specification

Model 9SDG*-60F2□ : Gear Type Shaft 9SDD*-60F2: D-Cut Type Shaft 9SDK*-60F2: 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	
9SDG1(A)-60F2□	60	1 ∅ 110	60	4	Cont.	90-1700	4.00	0.400	5.50	0.550	1.60	0.160	16.0 / 250
9SDG2(D)-60F2□	60	1 ∅ 220	60	4	Cont.	90-1700	4.00	0.400	5.50	0.550	1.60	0.160	5.0 / 400
9SDGE-60F2□	60	1 ∅ 220	50	4	Cont.	90-1400	4.00	0.400	5.20	0.520	1.40	0.140	5.0 / 450
		1 ∅ 240					4.50	0.450	5.80	0.580	1.60	0.160	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Speed-Torque Characteristics



## Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
9SDG*-60F2P	9PBK □ BH	1200	110	60	kgfcm	8.9	13.4	16.0	22.3	26.7	33.4	40.1	44.6	50.2	60.2	72.3	80.3	90.8	108.9	130.7	145.2	181.5	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
					N.m	0.87	1.31	1.57	2.18	2.62	3.27	3.93	4.37	4.92	5.90	7.08	7.87	8.89	10.67	12.81	14.23	17.79	19.60	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		220/240	50	kgfcm	8.4	12.6	15.2	21.1	25.3	31.6	37.9	42.1	47.5	56.9	68.3	75.9	85.8	103.0	123.6	137.3	171.6	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
				N.m	0.83	1.24	1.49	2.06	2.48	3.10	3.71	4.13	4.65	5.58	6.70	7.44	8.41	10.09	12.11	13.45	16.82	19.60	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		9PFK □ BH	90	110	60	kgfcm	2.6	3.9	4.7	6.5	7.8	9.7	11.7	13.0	14.6	17.5	21.0	23.4	26.4	31.7	38.0	42.2	52.8	63.4	70.8	85.0	94.4	113.3	141.6	169.9	188.8	188.8
						N.m	0.25	0.38	0.46	0.64	0.76	0.95	1.14	1.27	1.43	1.72	2.06	2.29	2.59	3.10	3.73	4.14	5.17	6.21	6.94	8.33	9.25	11.10	13.88	16.65	18.50	18.50
	220/240		50	60	kgfcm	2.6	3.9	4.7	6.5	7.8	9.7	11.7	13.0	14.6	17.5	21.0	23.4	26.4	31.7	38.0	42.2	52.8	63.4	70.8	85.0	94.4	113.3	141.6	169.9	188.8	188.8	
					N.m	0.25	0.38	0.46	0.64	0.76	0.95	1.14	1.27	1.43	1.72	2.06	2.29	2.59	3.10	3.73	4.14	5.17	6.21	6.94	8.33	9.25	11.10	13.88	16.65	18.50	18.50	
	220/240		50	60	kgfcm	2.3	3.4	4.1	5.7	6.8	8.5	10.2	11.3	12.8	15.3	18.4	20.4	23.1	27.7	33.3	37.0	46.2	55.4	62.0	74.3	82.6	99.1	123.9	148.7	165.2	165.2	
					N.m	0.22	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.25	1.50	1.80	2.00	2.26	2.72	3.26	3.62	4.53	5.43	6.07	7.29	8.09	9.71	12.14	14.57	16.19	16.19	

# B AC Motors

## S.C. Induction Motor 60W (□ 90mm)

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
9SDG*-60F2H	9HBK □ BH 9HFK □ BH	1200	110	60	kgfcm N.m	13.4 1.31	16.0 1.57	22.3 2.18	26.7 2.62	33.4 3.27	40.1 3.93	44.6 4.37	50.2 4.92	60.2 5.90	72.3 7.08	80.3 7.87	90.8 8.89
			220	60	kgfcm N.m	13.4 1.31	16.0 1.57	22.3 2.18	26.7 2.62	33.4 3.27	40.1 3.93	44.6 4.37	50.2 4.92	60.2 5.90	72.3 7.08	80.3 7.87	90.8 8.89
			220/ 240	50	kgfcm N.m	12.6 1.24	15.2 1.49	21.1 2.06	25.3 2.48	31.6 3.10	37.9 3.71	42.1 4.13	47.5 4.65	56.9 5.58	68.3 6.70	75.9 7.44	85.8 8.41
		90	110	60	kgfcm N.m	3.9 0.38	4.7 0.46	6.5 0.64	7.8 0.76	9.7 0.95	11.7 1.14	13.0 1.27	14.6 1.43	17.5 1.72	21.0 2.06	23.4 2.29	26.4 2.59
			220	60	kgfcm N.m	3.9 0.38	4.7 0.46	6.5 0.64	7.8 0.76	9.7 0.95	11.7 1.14	13.0 1.27	14.6 1.43	17.5 1.72	21.0 2.06	23.4 2.29	26.4 2.59
			220/ 240	50	kgfcm N.m	3.4 0.33	4.1 0.40	5.7 0.56	6.8 0.67	8.5 0.83	10.2 1.00	11.3 1.11	12.8 1.25	15.3 1.50	18.4 1.80	20.4 2.00	23.1 2.26

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200		
9SDG*-60F2H	9HBK □ BH 9HFK □ BH	1200	110	60	kgfcm N.m	108.9 10.67	130.7 12.81	145.2 14.23	181.5 17.79	217.8 21.34	243.4 23.85	292.1 28.62	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	108.9 10.67	130.7 12.81	145.2 14.23	181.5 17.79	217.8 21.34	243.4 23.85	292.1 28.62	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	103.0 10.09	123.6 12.11	137.3 13.45	171.6 16.82	205.9 20.18	230.1 22.55	276.1 27.06	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	31.7 3.10	38.0 3.73	42.2 4.14	52.8 5.17	63.4 6.21	70.8 6.94	85.0 8.33	94.4 9.25	113.3 11.10	141.6 13.88	169.9 16.65	188.8 18.50		
			220	60	kgfcm N.m	31.7 3.10	38.0 3.73	42.2 4.14	52.8 5.17	63.4 6.21	70.8 6.94	85.0 8.33	94.4 9.25	113.3 11.10	141.6 13.88	169.9 16.65	188.8 18.50		
			220/ 240	50	kgfcm N.m	27.7 2.72	33.3 3.26	37.0 3.62	46.2 4.53	55.4 5.43	62.0 6.07	74.3 7.29	82.6 8.09	99.1 9.71	123.9 12.14	148.7 14.57	165.2 16.19		

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SDG*-60F2W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm N.m	45.1 4.42	52.8 5.17	63.5 6.23	73.3 7.18	96.3 9.43	108.9 10.67	126.7 12.42	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	45.1 4.42	52.8 5.17	63.5 6.23	73.3 7.18	96.3 9.43	108.9 10.67	126.7 12.42	142.9 14.00	122.4 12.00
			220/240	50	kgfcm N.m	47.6 4.66	55.7 5.46	67.0 6.57	77.3 7.57	101.5 9.95	114.8 11.25	133.6 13.10	142.9 14.00	122.4 12.00
		90	110	60	kgfcm N.m	13.1 1.29	15.4 1.51	18.5 1.81	21.3 2.09	28.0 2.74	31.7 3.10	36.9 3.61	48.0 4.70	52.8 5.17
			220	60	kgfcm N.m	13.1 1.29	15.4 1.51	18.5 1.81	21.3 2.09	28.0 2.74	31.7 3.10	36.9 3.61	48.0 4.70	52.8 5.17
			220/240	50	kgfcm N.m	13.1 1.29	15.4 1.51	18.5 1.81	21.3 2.09	28.0 2.74	31.7 3.10	36.9 3.61	48.0 4.70	52.8 5.17

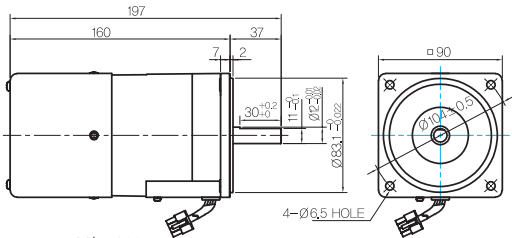
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SDG □ -60F2WH	9WHD □ -030	1200	110	60	kgfcm N.m	19.1 1.88	27.7 2.72	35.6 3.49	50.2 4.92	63.4 6.21	72.6 7.11	84.5 8.28	103.8 10.18	118.8 11.64	132.0 12.94	132.7 13.00
			220	60	kgfcm N.m	19.1 1.88	27.7 2.72	35.6 3.49	50.2 4.92	63.4 6.21	72.6 7.11	84.5 8.28	103.8 10.18	118.8 11.64	132.0 12.94	132.7 13.00
			220/240	50	kgfcm N.m	20.2 1.98	29.2 2.86	37.6 3.68	52.9 5.18	66.8 6.55	76.6 7.50	89.1 8.73	109.5 10.73	125.3 12.28	139.2 13.64	132.7 13.00
		90	110	60	kgfcm N.m	7.0 0.68	10.1 0.99	13.0 1.27	18.2 1.79	23.0 2.26	26.4 2.59	30.7 3.01	37.8 3.70	43.2 4.23	48.0 4.70	56.3 5.52
			220	60	kgfcm N.m	7.0 0.68	10.1 0.99	13.0 1.27	18.2 1.79	23.0 2.26	26.4 2.59	30.7 3.01	37.8 3.70	43.2 4.23	48.0 4.70	56.3 5.52
			220/240	50	kgfcm N.m	7.0 0.68	10.1 0.99	13.0 1.27	18.2 1.79	23.0 2.26	26.4 2.59	30.7 3.01	37.8 3.70	43.2 4.23	48.0 4.70	56.3 5.52

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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:  
9SDD□-60F2 (POWERFUL FAN)

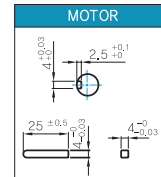


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

### MOTOR OUTPUT SHAFT

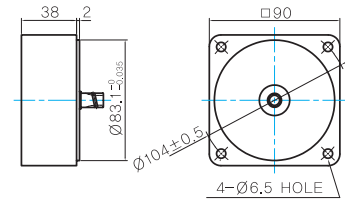
MODEL	SPEC
D-CUT TYPE	
KEY TYPE	
9SDD□-60F2	
9SDK□-60F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

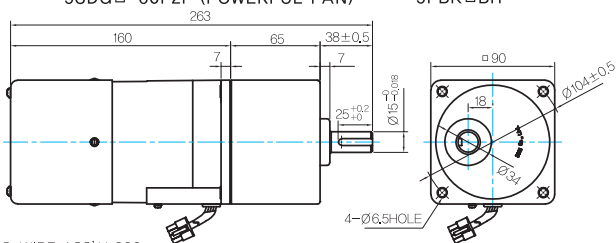
- MODEL: 9XD10□□



## GEARED MOTOR

### P TYPE GEARBOX

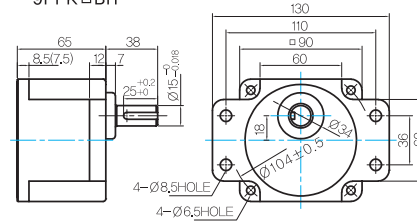
- MOTOR MODEL:  
9SDG□-60F2P (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9PBK□BH

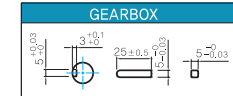
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

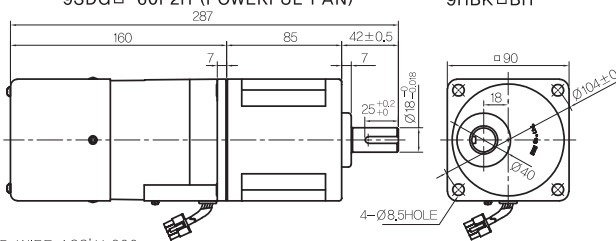
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

### KEY SPEC



### H TYPE GEARBOX

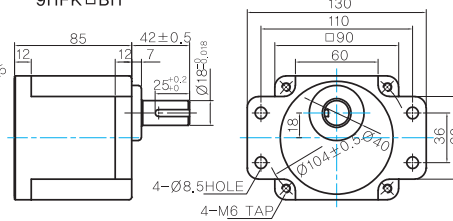
- MOTOR MODEL:  
9SDG□-60F2H (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9HBK□BH

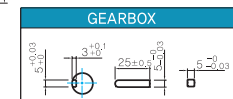
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

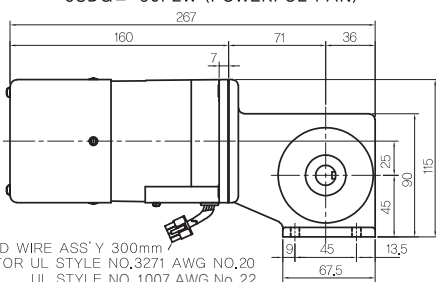
MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

### KEY SPEC



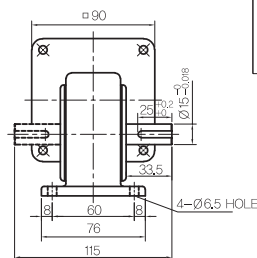
### W TYPE GEARBOX

- MOTOR MODEL:  
9SDG□-60F2W (POWERFUL FAN)

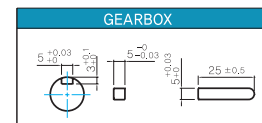


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9WD□BL/BR/BRL



### KEY SPEC

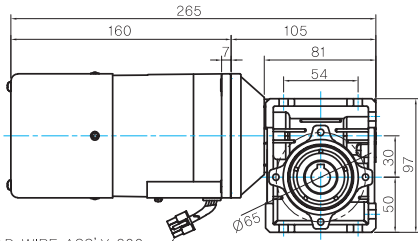


# B AC Motors

## S.C. Induction Motor 60W (□ 90mm)

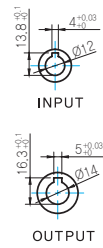
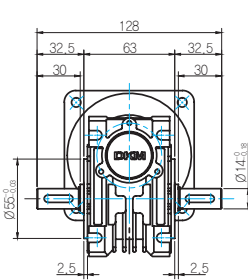
### WH TYPE GEARBOX

● MOTOR MODEL:  
9SDG□-60F2WH (POWERFUL FAN)

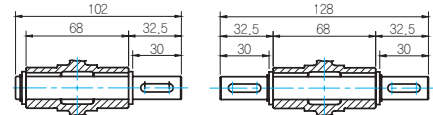


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T.G UL STYLE NO.1007 AWG No.22

● GEARBOX MODEL:  
9WHD□-030



● SHAFT



Unidirectional

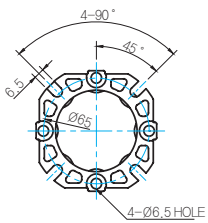
Bi-directional

### WEIGHT

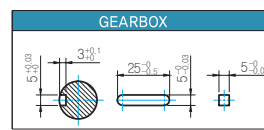
PART		WEIGHT(Kg)
MOTOR		3.15
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9HB(F)K3BH - 9HB(F)K10BH	1.62
	9HB(F)K12.5BH - 9HB(F)K20BH	1.68
	9HB(F)K25BH - 9HB(F)K60BH	1.73
	9HB(F)K75BH - 9HB(F)K200BH	1.78
	9WD□BL/BR/BRL	1.0
	9WHD□-030	1.2
9XD10□	0.6	

\* The output flange and shaft are sold separately

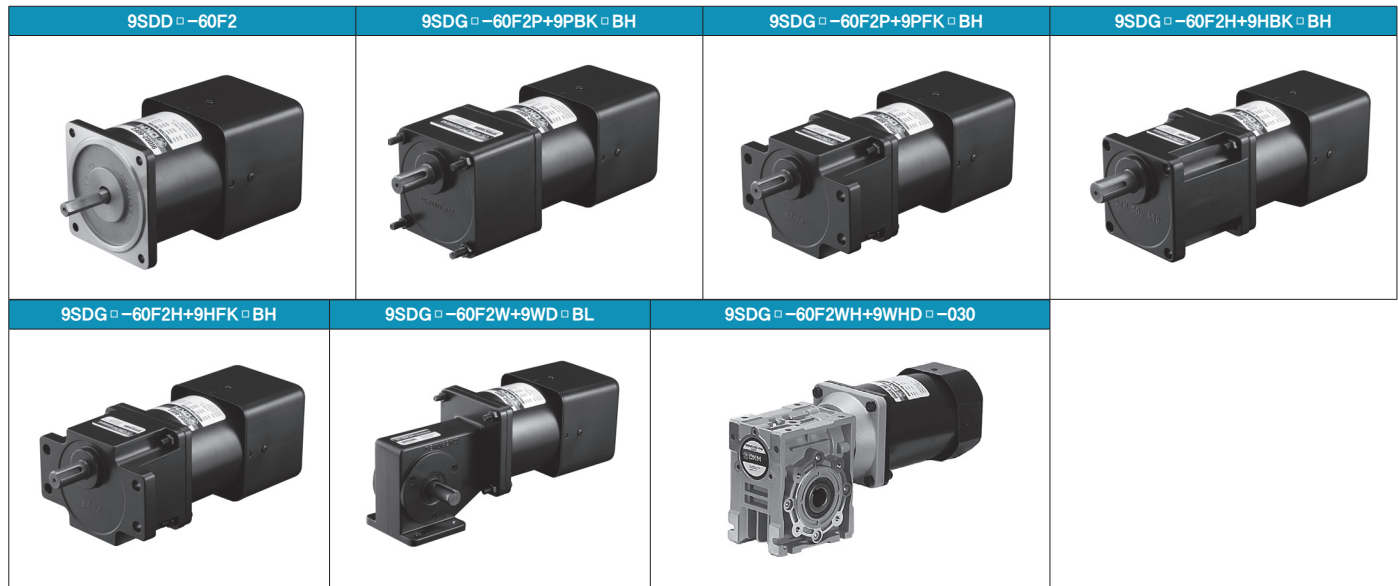
● FLANGE



● KEY SPEC



### Motor Images



# 90W

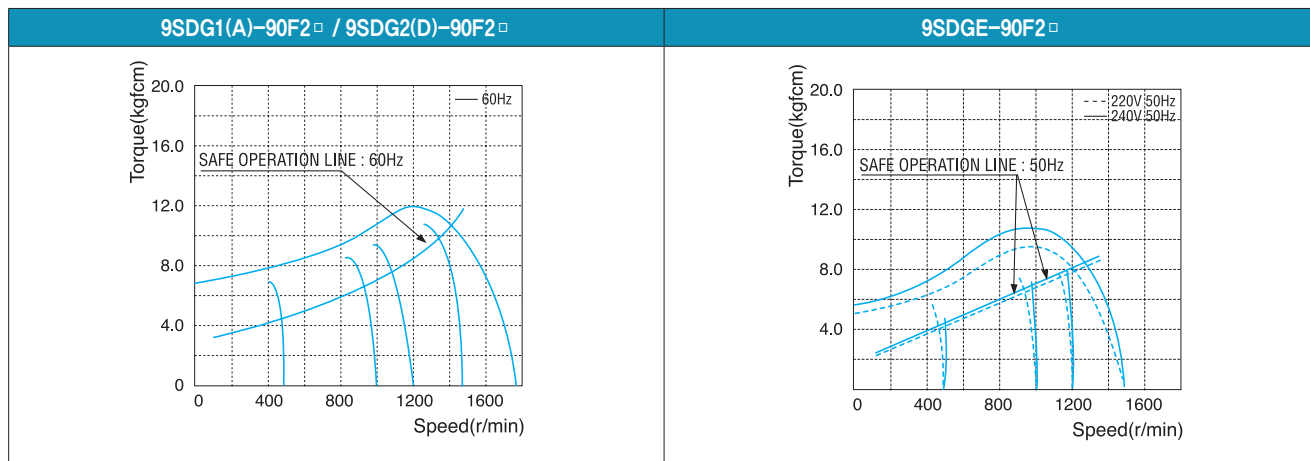
Speed Control Induction Motor  
90W(□ 90mm)

## Motor Specification

Model 9SDG*-90F2□ : Gear Type Shaft 9SDD*-90F2: D-Cut Type Shaft 9SDK*-60F2: 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	
9SDG1(A)-90F2□	90	1 ∅ 110	60	4	Cont.	90-1700	4.50	0.450	6.30	0.630	2.30	0.230	20.0 / 250
9SDG2(D)-90F2□	90	1 ∅ 220	60	4	Cont.	90-1700	4.50	0.450	6.30	0.630	2.30	0.230	6.0 / 450
9SDGE-90F2□	90	1 ∅ 220	50	4	Cont.	90-1400	4.50	0.450	5.40	0.540	2.20	0.220	6.0 / 450
		1 ∅ 240					5.00	0.500	6.10	0.610	2.30	0.230	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Speed-Torque Characteristics



## Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
9SDG*-90F2P	9PBK □ BH	1200	110	60	kgfcm	10.2	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0	124.7	149.7	166.3	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
					N.m	1.00	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19	12.22	14.67	16.30	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		220/240	kgfcm	10.2	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0	124.7	149.7	166.3	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	1.00	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19	12.22	14.67	16.30	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
		90	kgfcm	8.7	13.1	15.7	21.9	26.2	32.8	39.4	43.7	49.3	59.1	71.0	78.8	89.1	106.9	128.3	142.6	178.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
			N.m	0.86	1.29	1.54	2.14	2.57	3.21	3.86	4.29	4.83	5.79	6.95	7.73	8.73	10.48	12.57	13.97	17.46	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
	9PFBK □ BH	110	60	kgfcm	3.7	5.6	6.7	9.3	11.2	14.0	16.8	18.6	21.0	25.2	30.2	33.6	38.0	45.5	54.6	60.7	75.9	91.1	101.8	122.1	135.7	162.8	200.0	200.0	200.0	200.0	200.0	
				N.m	0.37	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.06	2.47	2.96	3.29	3.72	4.46	5.36	5.95	7.44	8.93	9.97	11.97	13.30	15.96	19.60	19.60	19.60	19.60	19.60	
		220	60	kgfcm	3.7	5.6	6.7	9.3	11.2	14.0	16.8	18.6	21.0	25.2	30.2	33.6	38.0	45.5	54.6	60.7	75.9	91.1	101.8	122.1	135.7	162.8	200.0	200.0	200.0	200.0	200.0	
				N.m	0.37	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.06	2.47	2.96	3.29	3.72	4.46	5.36	5.95	7.44	8.93	9.97	11.97	13.30	15.96	19.60	19.60	19.60	19.60	19.60	
		240	50	kgfcm	3.6	5.3	6.4	8.9	10.7	13.4	16.0	17.8	20.1	24.1	28.9	32.1	36.3	43.6	52.3	58.1	72.6	87.1	97.4	116.8	129.8	155.8	194.7	200.0	200.0	200.0	200.0	200.0
				N.m	0.35	0.52	0.63	0.87	1.05	1.31	1.57	1.75	1.97	2.36	2.83	3.15	3.56	4.27	5.12	5.69	7.11	8.54	9.54	11.45	12.72	15.26	19.08	19.60	19.60	19.60	19.60	

# B AC Motors

## S.C. Induction Motor 90W (□ 90mm)

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
9SDG*~90F2H	9HBK □ BH	1200	110	60	kgfcm N.m	15.3 1.50	18.4 1.80	25.5 2.50	30.6 3.00	38.3 3.75	45.9 4.50	51.0 5.00	57.5 5.63	69.0 6.76	82.8 8.11	92.0 9.01	104.0 10.19
			220	60	kgfcm N.m	15.3 1.50	18.4 1.80	25.5 2.50	30.6 3.00	38.3 3.75	45.9 4.50	51.0 5.00	57.5 5.63	69.0 6.76	82.8 8.11	92.0 9.01	104.0 10.19
			220/240	50	kgfcm N.m	13.1 1.29	15.7 1.54	21.9 2.14	26.2 2.57	32.8 3.21	39.4 3.86	43.7 4.29	49.3 4.83	59.1 5.79	71.0 6.95	78.8 7.73	89.1 8.73
	9HFK □ BH	90	110	60	kgfcm N.m	5.6 0.55	6.7 0.66	9.3 0.91	11.2 1.10	14.0 1.37	16.8 1.64	18.6 1.83	21.0 2.06	25.2 2.47	30.2 2.96	33.6 3.29	38.0 3.72
			220	60	kgfcm N.m	5.6 0.55	6.7 0.66	9.3 0.91	11.2 1.10	14.0 1.37	16.8 1.64	18.6 1.83	21.0 2.06	25.2 2.47	30.2 2.96	33.6 3.29	38.0 3.72
			220/240	50	kgfcm N.m	5.3 0.52	6.4 0.63	8.9 0.87	10.7 1.05	13.4 1.31	16.0 1.57	17.8 1.75	20.1 1.97	24.1 2.36	28.9 2.83	32.1 3.15	36.3 3.56

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200		
9SDG*~90F2H	9HBK □ BH	1200	110	60	kgfcm N.m	124.7 12.22	149.7 14.67	166.3 16.30	207.9 20.37	249.5 24.45	278.8 27.32	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	124.7 12.22	149.7 14.67	166.3 16.30	207.9 20.37	249.5 24.45	278.8 27.32	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	106.9 10.48	128.3 12.57	142.6 13.97	178.2 17.46	213.8 20.96	239.0 23.42	286.7 28.10	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
	9HFK □ BH	90	110	60	kgfcm N.m	45.5 4.46	54.6 5.36	60.7 5.95	75.9 7.44	91.1 8.93	101.8 9.97	122.1 11.97	135.7 13.30	162.8 15.96	203.6 19.95	244.3 23.94	271.4 26.60		
			220	60	kgfcm N.m	45.5 4.46	54.6 5.36	60.7 5.95	75.9 7.44	91.1 8.93	101.8 9.97	122.1 11.97	135.7 13.30	162.8 15.96	203.6 19.95	244.3 23.94	271.4 26.60		
			220/240	50	kgfcm N.m	43.6 4.27	52.3 5.12	58.1 5.69	72.6 7.11	87.1 8.54	97.4 9.54	116.8 11.45	129.8 12.72	155.8 15.26	194.7 19.08	233.6 22.90	259.6 25.44		

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SDG*~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	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44
			220	60	kgfcm N.m	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44
			220/240	50	kgfcm N.m	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SDG*~90F2WH	9WHD □ -030	1200	110	60	kgfcm N.m	21.9 2.15	31.8 3.11	40.8 4.00	57.5 5.63	72.6 7.11	83.2 8.15	96.8 9.48	118.9 11.66	136.1 13.34	151.2 14.82	132.7 13.00
			220	60	kgfcm N.m	21.9 2.15	31.8 3.11	40.8 4.00	57.5 5.63	72.6 7.11	83.2 8.15	96.8 9.48	118.9 11.66	136.1 13.34	151.2 14.82	132.7 13.00
			220/240	50	kgfcm N.m	21.2 2.08	30.7 3.01	39.5 3.87	55.6 5.45	70.3 6.89	80.5 7.89	93.7 9.18	115.2 11.29	131.8 12.91	146.4 14.35	132.7 13.00
		90	110	60	kgfcm N.m	8.0 0.78	11.6 1.14	14.9 1.46	21.0 2.06	26.5 2.60	30.4 2.98	35.3 3.46	43.4 4.26	49.7 4.87	55.2 5.41	64.8 6.35
			220	60	kgfcm N.m	8.0 0.78	11.6 1.14	14.9 1.46	21.0 2.06	26.5 2.60	30.4 2.98	35.3 3.46	43.4 4.26	49.7 4.87	55.2 5.41	64.8 6.35
			220/240	50	kgfcm N.m	8.0 0.78	11.6 1.14	14.9 1.46	21.0 2.06	26.5 2.60	30.4 2.98	35.3 3.46	43.4 4.26	49.7 4.87	55.2 5.41	64.8 6.35

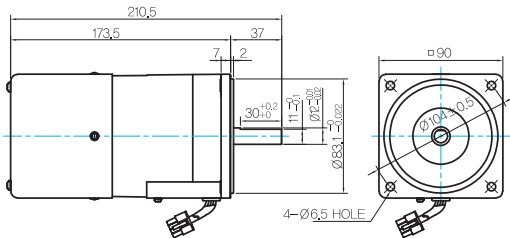
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	15	20	25	30	40	50	60	80	100	120	160	200	225	240
9SDG*~90F2HC	9HC □ □	1200	110	60	kgfcm N.m	69 6.76	92 9.02	115 11.3	138 13.5	184 18	230 22.5	276 27	368 36.1	460 45.1	552 54.1	736 72.1	920 90.2	1035 101	1104 108
			220	60	kgfcm N.m	69 6.76	92 9.02	115 11.3	138 13.5	184 18	230 22.5	276 27	368 36.1	460 45.1	552 54.1	736 72.1	920 90.2	1035 101	1104 108
			220/240	50	kgfcm N.m	59.1 5.79	78.8 7.72	98.6 9.66	118 11.6	158 15.5	197 19.3	237 23.2	315 30.9	394 38.6	473 46.4	631 61.8	788 77.1	887 86.9	946 92.7
		90	110	60	kgfcm N.m	25.2 2.47	33.6 3.29	42 4.12	50.4 4.94	67.2 6.59	84 8.23	101 9.9	134 13.1	168 16.5	201 19.7	269 26.4	336 32.9	378 37	403 39.5
			220	60	kgfcm N.m	25.2 2.47	33.6 3.29	42 4.12	50.4 4.94	67.2 6.59	84 8.23	101 9.9	134 13.1	168 16.5	201 19.7	269 26.4	336 32.9	378 37	403 39.5
			220/240	50	kgfcm N.m	24.1 2.36	32.1 3.15	40.2 3.94	48.2 4.72	64.2 6.29	80.3 7.87	96.4 9.45	128 12.5	161 15.8	193 18.9	257 25.2	321 31.5	361 35.4	385 37.7

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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:  
9SDD□-90F2 (POWERFUL FAN)

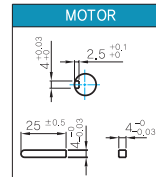


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

### MOTOR OUTPUT SHAFT

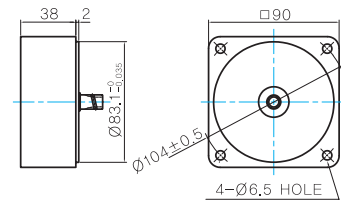
MODEL	SPEC
D-CUT TYPE	37 30±0.03 11±0.03 102±0.03
9SDD□-90F2	
KEY TYPE	37 30±0.03 11±0.03 102±0.03
9SDK□-90F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

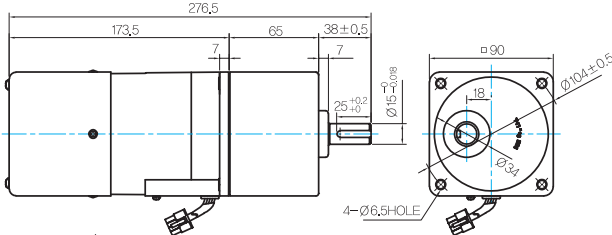
- MODEL: 9XD10□□



## GEARED MOTOR

### P TYPE GEARBOX

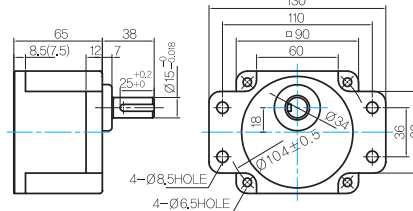
- MOTOR MODEL:  
9SDG□-90F2P (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9PBK□BH

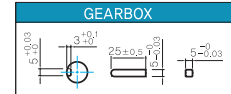
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

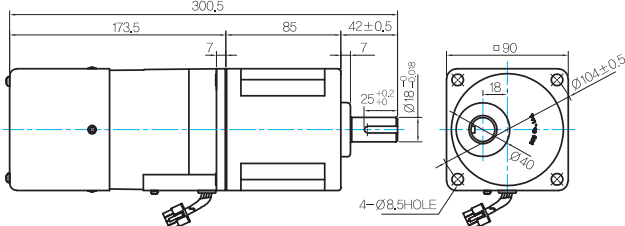
MODEL	SPEC
KEY TYPE	38 25±0.2 15±0.08
9PBK□BH	
9PFK□BH	

### KEY SPEC



### H TYPE GEARBOX

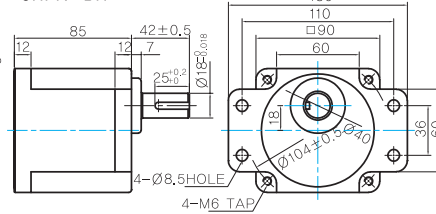
- MOTOR MODEL:  
9SDG□-90F2H (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9HBK□BH

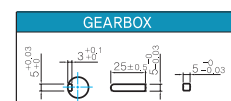
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

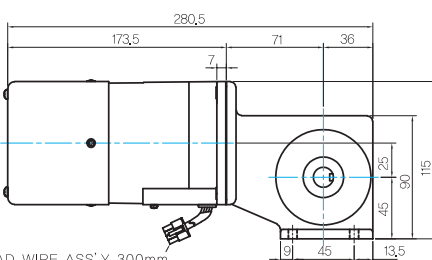
MODEL	SPEC
KEY TYPE	42 25±0.2 18±0.08
9HBK□BH	
9HFK□BH	

### KEY SPEC



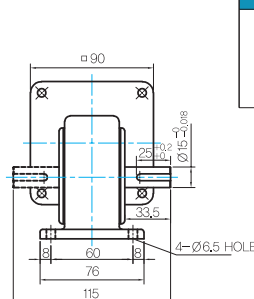
### W TYPE GEARBOX

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

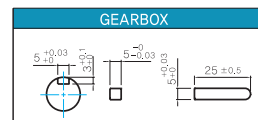


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9WD□BL/BR/BRL



### KEY SPEC







**S.C. Induction Motor 120W (□ 90mm)**

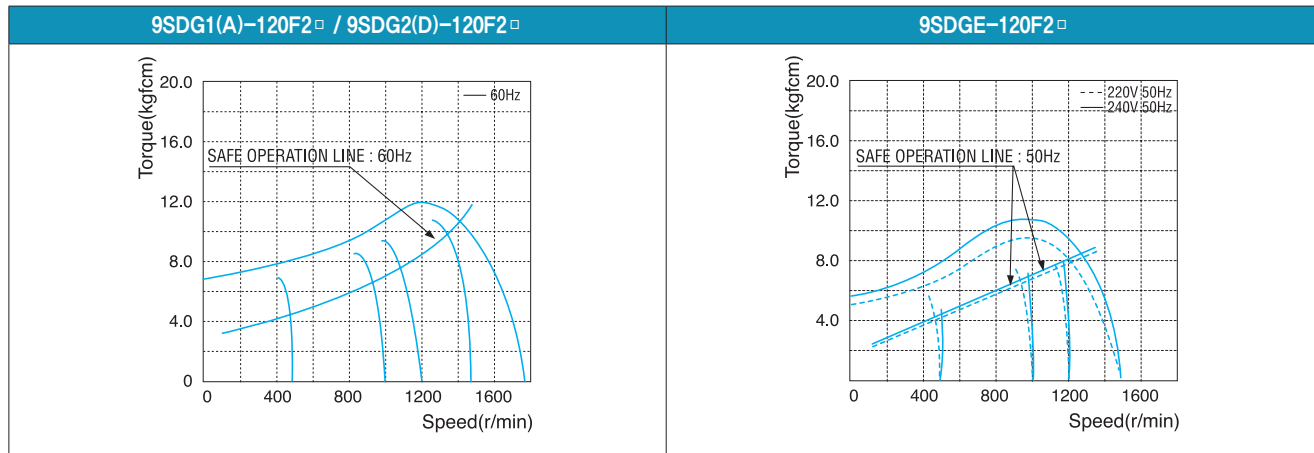
# 120W

 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 Lead Wire Type	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	kgfcm	N.m	
<b>9SDG1(A)–120F2</b> □	120	1 ∅110	60	4	Cont.	90–1700	5.70	0.570	8.30	0.830	2.80	0.280	25.0 / 250
<b>9SDG2(D)–120F2</b> □	120	1 ∅220	60	4	Cont.	90–1700	5.70	0.570	8.30	0.830	2.80	0.280	6.5 / 450
<b>9SDGE–120F2</b> □	120	1 ∅220	50	4	Cont.	90–1400	5.70	0.570	8.00	0.800	2.80	0.280	6.5 / 450
		1 ∅240					6.20	0.620	8.60	0.860	2.90	0.290	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D–Cut Type Shaft is for using the motor only.

**Speed–Torque Characteristics**

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	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	13.4	20.2	24.2	33.6	40.3	50.4	60.5	67.2	75.7	90.9	109.1	121.2	137.0	164.3	197.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
					N.m	1.32	1.98	2.37	3.29	3.95	4.94	5.93	6.59	7.42	8.91	10.69	11.88	13.42	16.11	19.33	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	13.0	19.4	23.3	32.4	38.9	48.6	58.3	64.8	73.0	87.6	105.1	116.8	132.0	158.4	190.1	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		N.m	1.27	1.91	2.29	3.18	3.81	4.76	5.72	6.35	7.15	8.58	10.30	11.45	12.94	15.52	18.63	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	90	110	60	kgfcm	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9	46.2	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0	200.0	200.0
						N.m	0.44	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60
	220/240			50	kgfcm	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9	46.2	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0	200.0	200.0	
	N.m		0.44	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60	19.60			

# B AC Motors

## S.C. Induction Motor 120W (□ 90mm)

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
9SDG*–120F2H	9HBK □ BH	1200	110	60	kgfcm N.m	20.2 1.98	24.2 2.37	33.6 3.29	40.3 3.95	50.4 4.94	60.5 5.93	67.2 6.59	75.7 7.42	90.9 8.91	109.1 10.69	121.2 11.88	137.0 13.42
			220	60	kgfcm N.m	20.2 1.98	24.2 2.37	33.6 3.29	40.3 3.95	50.4 4.94	60.5 5.93	67.2 6.59	75.7 7.42	90.9 8.91	109.1 10.69	121.2 11.88	137.0 13.42
			220/240	50	kgfcm N.m	19.4 1.91	23.3 2.29	32.4 3.18	38.9 3.81	48.6 4.76	58.3 5.72	64.8 6.35	73.0 7.15	87.6 8.58	105.1 10.30	116.8 11.45	132.0 12.94
	9HFK □ BH	90	110	60	kgfcm N.m	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01	46.2 4.53
			220	60	kgfcm N.m	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01	46.2 4.53
			220/240	50	kgfcm N.m	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01	46.2 4.53

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200		
9SDG*–120F2H	9HBK □ BH	1200	110	60	kgfcm N.m	164.3 16.11	197.2 19.33	219.1 21.47	273.9 26.84	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	60	kgfcm N.m	164.3 16.11	197.2 19.33	219.1 21.47	273.9 26.84	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
			220/240	50	kgfcm N.m	158.4 15.52	190.1 18.63	211.2 20.70	264.0 25.87	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
	9HFK □ BH	90	110	60	kgfcm N.m	55.4 5.43	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	247.8 24.28	297.4 29.14	300.0 29.40		
			220	60	kgfcm N.m	55.4 5.43	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	247.8 24.28	297.4 29.14	300.0 29.40		
			220/240	50	kgfcm N.m	55.4 5.43	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	247.8 24.28	297.4 29.14	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	68.1 6.67	79.7 7.81	95.9 9.39	110.6 10.83	145.3 14.23	164.3 16.11	153.1 15.00	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	68.1 6.67	79.7 7.81	95.9 9.39	110.6 10.83	145.3 14.23	164.3 16.11	153.1 15.00	142.9 14.00	122.4 12.00
			220/240	50	kgfcm N.m	65.6 6.43	76.8 7.53	92.4 9.06	106.6 10.44	140.0 13.72	158.4 15.52	153.1 15.00	142.9 14.00	122.4 12.00
		90	110	60	kgfcm N.m	23.0 2.25	26.9 2.63	32.3 3.17	37.3 3.66	49.0 4.80	55.4 5.43	64.5 6.32	84.0 8.23	122.4 12.00
			220	60	kgfcm N.m	23.0 2.25	26.9 2.63	32.3 3.17	37.3 3.66	49.0 4.80	55.4 5.43	64.5 6.32	84.0 8.23	122.4 12.00
			220/240	50	kgfcm N.m	23.0 2.25	26.9 2.63	32.3 3.17	37.3 3.66	49.0 4.80	55.4 5.43	64.5 6.32	84.0 8.23	122.4 12.00

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SDG*–120F2WH	9WHD □	1200	110	60	kgfcm N.m	28.9 2.83	41.8 4.10	53.8 5.27	75.7 7.42	95.6 9.37	109.6 10.74	127.5 12.49	156.7 15.36	173.5 17.00	163.3 16.00	132.7 13.00
			220	60	kgfcm N.m	28.9 2.83	41.8 4.10	53.8 5.27	75.7 7.42	95.6 9.37	109.6 10.74	127.5 12.49	156.7 15.36	173.5 17.00	163.3 16.00	132.7 13.00
			220/240	50	kgfcm N.m	29.9 2.93	43.3 4.25	55.7 5.46	78.4 7.69	99.1 9.71	113.5 11.12	132.1 12.95	162.4 15.91	173.5 17.00	163.3 16.00	132.7 13.00
		90	110	60	kgfcm N.m	9.7 0.95	14.1 1.38	18.1 1.78	25.5 2.50	32.3 3.16	37.0 3.62	43.0 4.21	52.9 5.18	60.5 5.93	67.2 6.59	78.8 7.73
			220	60	kgfcm N.m	9.7 0.95	14.1 1.38	18.1 1.78	25.5 2.50	32.3 3.16	37.0 3.62	43.0 4.21	52.9 5.18	60.5 5.93	67.2 6.59	78.8 7.73
			220/240	50	kgfcm N.m	10.1 0.99	14.6 1.43	18.8 1.84	26.4 2.59	33.4 3.27	38.3 3.75	44.5 4.37	54.8 5.37	62.6 6.14	69.6 6.82	81.7 8.00

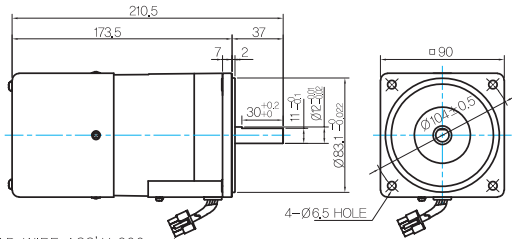
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	15	20	25	30	40	50	60	80	100	120	160	200	225	240
9SDG*–120F2HC	9HC □ □	1200	110	60	kgfcm N.m	90.9 8.91	121 11.9	151 14.8	182 17.8	242 23.7	303 29.7	364 35.7	485 47.5	606 59.4	727 71.2	969 95	1212 119	1363 134	1454 142
			220	60	kgfcm N.m	90.9 8.91	121 11.9	151 14.8	182 17.8	242 23.7	303 29.7	364 35.7	485 47.5	606 59.4	727 71.2	969 95	1212 119	1363 134	1454 142
			220/240	50	kgfcm N.m	87.6 8.58	117 11.5	146 14.3	175 17.2	234 22.9	292 28.6	350 34.3	467 45.8	584 57.2	701 68.7	934 91.5	1168 115	1314 129	1402 137
		90	110	60	kgfcm N.m	30.7 3.01	40.9 4.01	51.1 5.01	61.3 6.01	81.8 8.02	102 10	123 12.1	164 16.1	204 20	245 24	327 32	409 40.1	460 45.1	491 48.1
			220	60	kgfcm N.m	30.7 3.01	40.9 4.01	51.1 5.01	61.3 6.01	81.8 8.02	102 10	123 12.1	164 16.1	204 20	245 24	327 32	409 40.1	460 45.1	491 48.1
			220/240	50	kgfcm N.m	30.7 3.01	40.9 4.01	51.1 5.01	61.3 6.01	81.8 8.02	102 10	123 12.1	164 16.1	204 20	245 24	327 32	409 40.1	460 45.1	491 48.1

1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.  
 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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:  
9SDD□-120F2 (POWERFUL FAN)

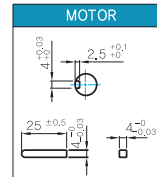


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

### MOTOR OUTPUT SHAFT

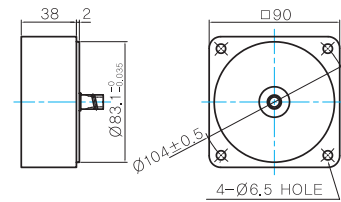
MODEL	SPEC
D-CUT TYPE	
9SDD□-120F2	
KEY TYPE	
9SDK□-120F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

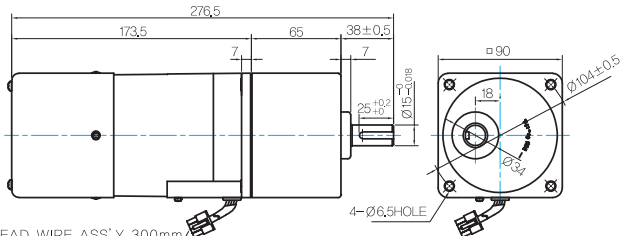
- MODEL: 9XD10□□



## GEARED MOTOR

### P TYPE GEARBOX

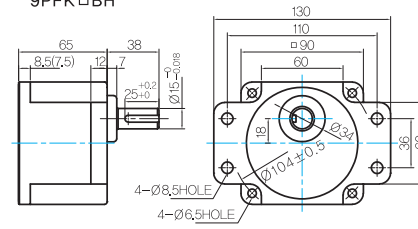
- MOTOR MODEL:  
9SDG□-120F2P (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9PBK□BH

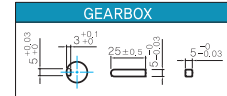
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

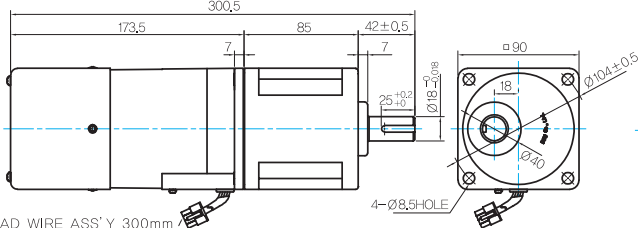
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

### KEY SPEC



### H TYPE GEARBOX

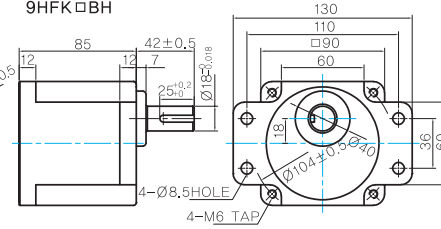
- MOTOR MODEL:  
9SDG□-120F2H (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9HBK□BH

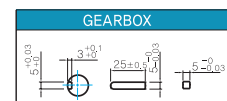
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

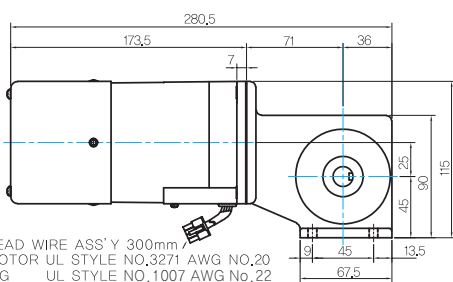
MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

### KEY SPEC



### W TYPE GEARBOX

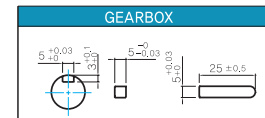
- MOTOR MODEL:  
9SDG□-120F2W (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9WD□BL/BR/BRL

### KEY SPEC





# 180W

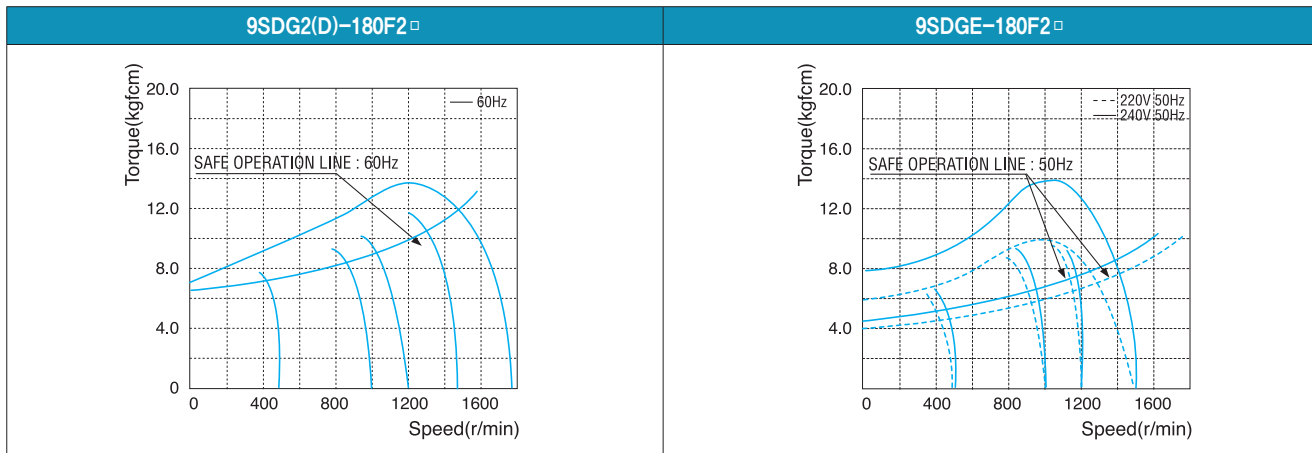
Speed Control Induction Motor 180W(□ 90mm)

## Motor Specification

Model 9SDG*-180F2□: Gear Type Shaft 9SDD*-180F2: D-Cut Type Shaft 9SDK*-180F2: Key Type Shaft Lead Wire Type	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	kgfcm	N.m	
9SDG1(A)-180F2□	180	1∅110	60	4	Cont.	90-1700	6.40	0.640	10.00	1.000	3.00	0.300	30.0 / 250
9SDG2(D)-180F2□	180	1∅220	60	4	Cont.	90-1700	6.40	0.640	10.00	1.000	3.00	0.300	8.0 / 450
9SDGE-180F2□	180	1∅220	50	4	Cont.	90-1400	6.40	0.640	10.00	1.000	3.00	0.300	8.0 / 450
		7.00					0.700	11.00	1.100	3.30	0.330		

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

## Speed-Torque Characteristics



## Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
9SDG*-180F2H	9HBK □ BH	1200	110	60	kgfcm	24.3	29.2	40.5	48.6	60.8	72.9	81.0	91.3	109.5	131.4	146.0	165.0	198.0	237.6	264.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0		
					N.m	2.38	2.86	3.97	4.76	5.95	7.14	7.94	8.94	10.73	12.88	14.31	16.17	19.40	23.28	25.87	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	24.3	29.2	40.5	48.6	60.8	72.9	81.0	91.3	109.5	131.4	146.0	165.0	198.0	237.6	264.0	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	2.38	2.86	3.97	4.76	5.95	7.14	7.94	8.94	10.73	12.88	14.31	16.17	19.40	23.28	25.87	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
		9HFK □ BH	90	110	60	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0	300.0	300.0
						N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40	29.40	29.40
	220/240		50	60	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0	300.0	300.0	
					N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40	29.40	29.40	29.40



## GEARED MOTOR

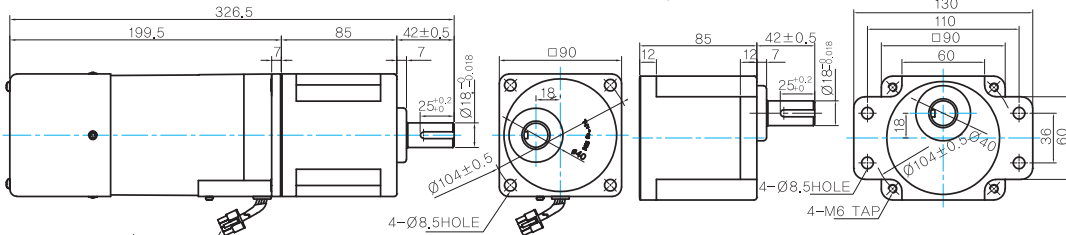
### ☉ H TYPE GEARBOX

● MOTOR MODEL:  
9SDG□-180F2H (POWERFUL FAN)

● GEARBOX MODEL:  
9HBK□BH

● GEARBOX MODEL:  
9HFK□BH

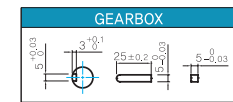
● GEARBOX OUTPUT SHAFT



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T.G UL STYLE NO.1007 AWG No.22

MODEL	SPEC
KEY TYPE	42
9HBK□BH	25
9HFK□BH	Ø18±0.018

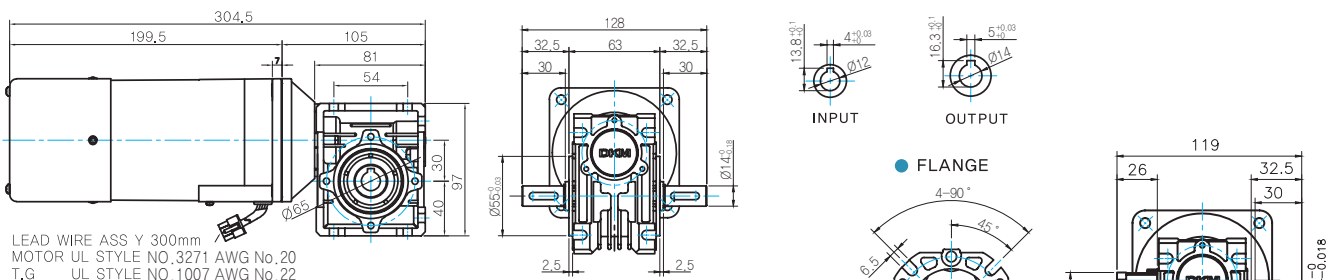
● KEY SPEC



### ☉ WH TYPE GEARBOX

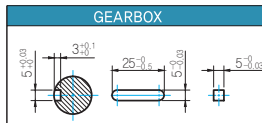
● MOTOR MODEL:  
9SDG□-180F2WH (POWERFUL FAN)

● GEARBOX MODEL:  
9WHD□-030

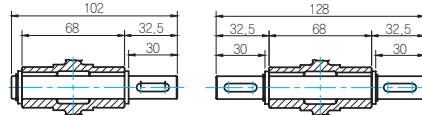


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T.G UL STYLE NO.1007 AWG No.22

● KEY SPEC



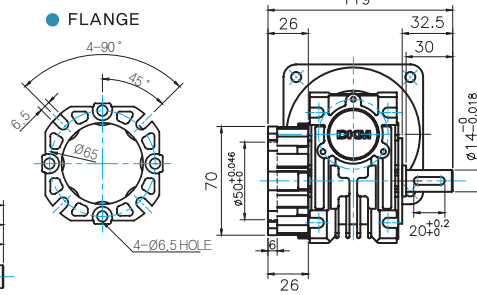
● SHAFT



Unidirectional

Bi-directional

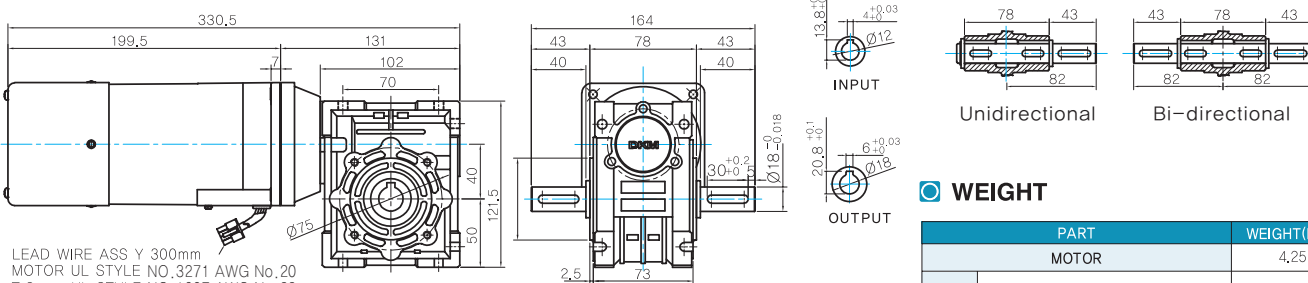
● FLANGE



● MOTOR MODEL:  
9SDG□-180F2WH (GENERAL FAN)

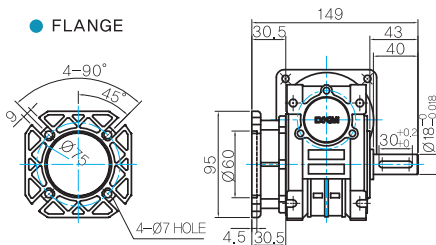
● GEARBOX MODEL:  
9WHD□-040

● SHAFT

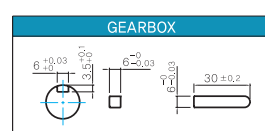


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T.G UL STYLE NO.1007 AWG No.22

● FLANGE



● KEY SPEC



### ☉ WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4.25	
GEAR BOX	9HB(F)K3BH ~ 9HB(F)K10BH	1.62
	9HB(F)K12.5BH ~ 9HB(F)K20BH	1.68
	9HB(F)K25BH ~ 9HB(F)K60BH	1.73
	9HB(F)K75BH ~ 9HB(F)K200BH	1.78
	9WHD□-030	1.2
9WHD□-040	2.1	
9XD10□	0.6	

\* The output flange and shaft are sold separately

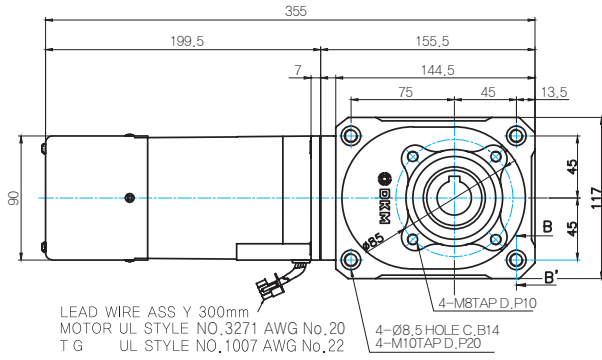


# B AC Motors

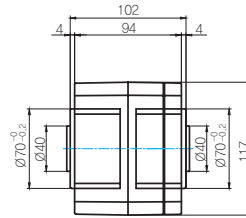
## S.C. Induction Motor 180W (□ 90mm)

### HC TYPE GEARBOX

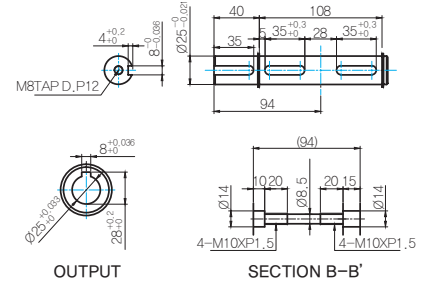
- MOTOR MODEL : 9SDG□-180F2HC-□ (POWERFUL FAN)



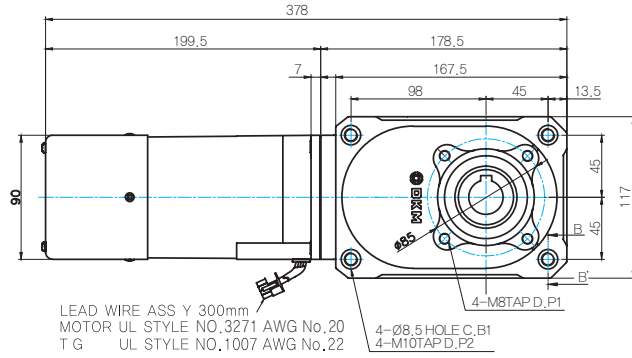
- GEARBOX MODEL : 9HC(15 ~ 60)□



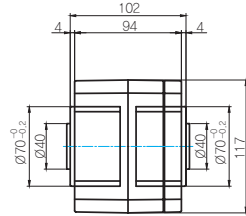
- SHAFT



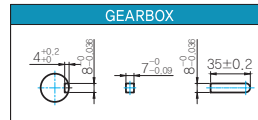
- MOTOR MODEL : 9SDG□-180F2HC-□ (POWERFUL FAN)



- GEARBOX MODEL : 9HC(80 ~ 240)□



- KEY SPEC



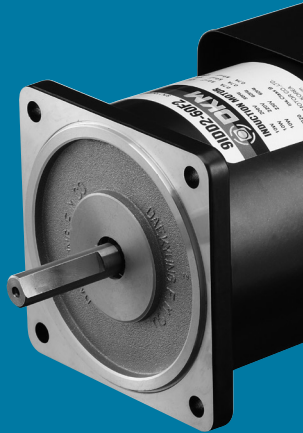
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	4.25
9HB(F)K3BH - 9HB(F)K10BH	1.62
9HB(F)K12.5BH - 9HB(F)K20BH	1.68
9HB(F)K25BH - 9HB(F)K60BH	1.73
9HB(F)K75BH - 9HB(F)K200BH	1.78
9WHD□-030	1.2
9WHD□-040	2.1
9HC15□	4.05
9HC20□~9HC60□	4.1
9HC80□~9HC240□	4.75
9XD10□□	0.6

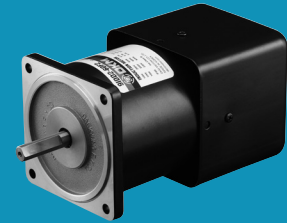
\* The output flange and shaft are sold separately

### Motor Images





# Speed Control Reversible Motor



S.C. Reversible Motor

## Index

Speed Control Reversible Motor 6W (□ 60mm)	B-259
Speed Control Reversible Motor 6W (□ 70mm)	B-261
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Speed Control Reversible Motor 120W (□ 90mm)	B-284

# B AC Motors

S.C. Reversible Motor 6W (□ 60mm)

## 6W Speed Control Reversible Motor 6W(□ 60mm)

### Motor Specification

Model 6SRDG*-6G: Gear Type Shaft 6SRDD*-6: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
6SRDG1(A)-6G	6	1φ 110	60	4	30min.	90-1700	0.36	0.036	0.54	0.054	0.36	0.036	3.0 / 250
6SRDG2(D)-6G	6	1φ 220	60	4	30min.	90-1700	0.40	0.040	0.56	0.056	0.39	0.039	1.0 / 450
6SRDGE-6G	6	1φ 220	50	4	30min.	90-1400	0.32	0.032	0.47	0.047	0.31	0.031	1.0 / 450
		1φ 240					0.36	0.036	0.52	0.052	0.33	0.033	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.
- 4) Impedance Protected Type

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

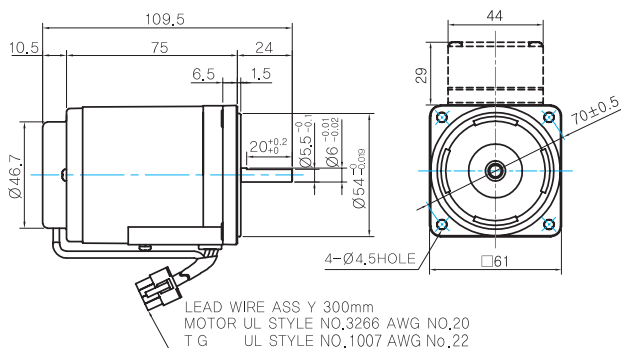
Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250		
6SRDG*-6G	6GBD □MH	1200	110	60	kgfcm	1.3	1.6	2.2	2.6	3.3	3.9	4.4	5.5	6.6	7.9	7.9	9.9	11.8	14.2	15.8	17.8	21.4	26.7	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	
					N.m	0.13	0.15	0.21	0.26	0.32	0.39	0.43	0.54	0.64	0.77	0.77	0.97	1.16	1.39	1.55	1.75	2.10	2.62	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
			220	60	kgfcm	1.4	1.6	2.3	2.7	3.4	4.1	4.5	5.7	6.8	8.2	8.2	10.2	12.3	14.7	16.4	18.5	22.2	27.7	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	92.4
		N.m	0.13	0.16	0.22	0.27	0.33	0.40	0.44	0.56	0.67	0.80	0.80	1.00	1.20	1.44	1.60	1.81	2.17	2.72	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	9.06	
		220/240	50	kgfcm	1.1	1.4	1.9	2.3	2.9	3.4	3.8	4.8	5.7	6.9	6.9	8.6	10.3	12.4	13.7	15.5	18.6	23.3	27.9	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
		N.m	0.11	0.13	0.19	0.22	0.28	0.34	0.37	0.47	0.56	0.67	0.67	0.84	1.01	1.21	1.34	1.52	1.82	2.28	2.74	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	
	90	110	60	kgfcm	0.9	1.0	1.5	1.7	2.2	2.6	2.9	3.6	4.4	5.2	5.3	6.6	7.9	9.5	10.5	11.9	14.3	17.8	21.4	23.8	28.5	30.0	30.0	30.0	30.0	30.0	30.0	
				N.m	0.09	0.10	0.14	0.17	0.21	0.26	0.29	0.36	0.43	0.51	0.52	0.64	0.77	0.93	1.03	1.16	1.40	1.75	2.10	2.33	2.79	2.94	2.94	2.94	2.94	2.94	2.94	
		220	60	kgfcm	0.9	1.1	1.6	1.9	2.4	2.8	3.2	3.9	4.7	5.7	5.7	7.1	8.5	10.2	11.4	12.9	15.4	19.3	23.2	25.7	30.0	30.0	30.0	30.0	30.0	30.0	30.0	
		N.m	0.09	0.11	0.15	0.19	0.23	0.28	0.31	0.39	0.46	0.56	0.56	0.70	0.84	1.00	1.12	1.26	1.51	1.89	2.27	2.52	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94		
		220/240	50	kgfcm	0.8	0.9	1.3	1.5	1.9	2.3	2.5	3.1	3.8	4.5	4.5	5.7	6.8	8.1	9.1	10.2	12.3	15.3	18.4	20.5	24.6	30.0	30.0	30.0	30.0	30.0	30.0	
		N.m	0.07	0.09	0.12	0.15	0.18	0.22	0.25	0.31	0.37	0.44	0.44	0.55	0.67	0.80	0.89	1.00	1.20	1.50	1.80	2.01	2.41	2.41	2.94	2.94	2.94	2.94	2.94	2.94		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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: 6SRDD□-6 (NO FAN)



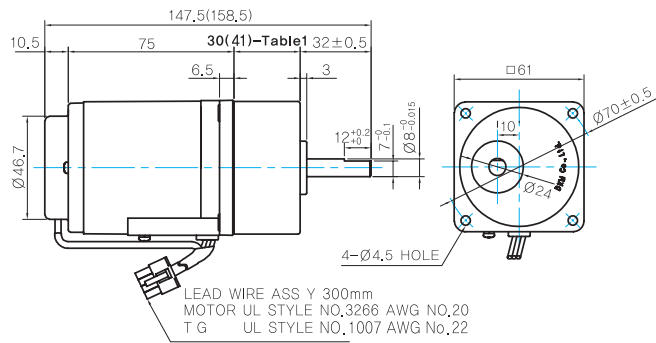
#### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

## GEARED MOTOR

### G TYPE GEARBOX

- MOTOR MODEL: 6SRDG□-6G (NO FAN)
- GEARBOX MODEL: 6GBD□MH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

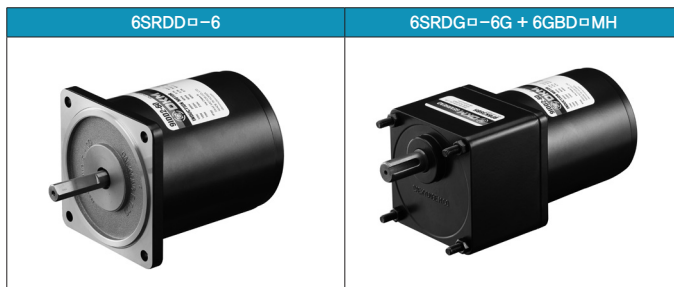
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	0,75
GEAR BOX	
6GBD3MH ~ 6GBD18MH	0,3
6GBD20MH ~ 6GBD40MH	0,32
6GBD50MH ~ 6GBD250MH	0,34

### 30(41)-Table1

SIZE(mm)	GEAR RATIO
30	6GBD3MH - 6GBD18MH
41	6GBD20MH - 6GBD250MH

## Motor Images



# B AC Motors

## S.C. Reversible Motor 6W (□ 70mm)

# 6W

## Speed Control Reversible Motor 6W(□ 70mm)

### Motor Specification

Model 7SRDG*-6G: Gear Type Shaft 7SRDD*-6: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
7SRDG1(A)-6G	6	1φ 110	60	4	30min.	90-1700	0.37	0.037	0.54	0.054	0.36	0.036	3.0 / 250
7SRDG2(D)-6G	6	1φ 220	60	4	30min.	90-1700	0.41	0.041	0.56	0.056	0.39	0.039	1.0 / 450
7SRDGE-6G	6	1φ 220	50	4	30min.	90-1400	0.32	0.032	0.47	0.047	0.31	0.031	1.0 / 450
		1φ 240							0.52	0.052	0.33	0.033	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

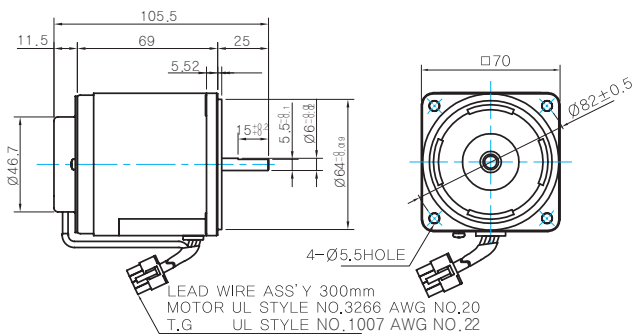
Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	
7SRDG*-6G	7GBK □ BMH	1200	110	60	kgfcm	1.3	1.6	2.2	2.6	3.3	3.9	4.4	5.5	6.6	7.9	7.9	9.9	11.8	14.2	15.8	17.8	21.4	26.7	32.1	35.6	42.8	50.0	50.0	50.0	
					N.m	0.13	0.15	0.21	0.26	0.32	0.39	0.43	0.54	0.64	0.77	0.77	0.97	1.16	1.39	1.55	1.75	2.10	2.62	3.14	3.49	4.19	4.90	4.90	4.90	
		220/240	50	kgfcm	1.1	1.4	1.9	2.3	2.9	3.4	3.8	4.8	5.7	6.9	6.9	8.6	10.3	12.4	13.7	15.5	18.6	23.3	27.9	31.0	37.2	46.5	50.0	50.0	4.90	
				N.m	0.11	0.13	0.19	0.22	0.28	0.34	0.37	0.47	0.56	0.67	0.67	0.84	1.01	1.21	1.34	1.52	1.82	2.28	2.74	3.04	3.65	4.56	4.90	4.90		
		90	110	60	kgfcm	0.9	1.0	1.5	1.7	2.2	2.6	2.9	3.6	4.4	5.2	5.3	6.6	7.9	9.5	10.5	11.9	14.3	17.8	21.4	23.8	28.5	35.6	42.8	47.5	4.66
					N.m	0.09	0.10	0.14	0.17	0.21	0.26	0.29	0.36	0.43	0.51	0.52	0.64	0.77	0.93	1.03	1.16	1.40	1.75	2.10	2.33	2.79	3.49	4.19	4.66	
	220		60	kgfcm	0.9	1.1	1.6	1.9	2.4	2.8	3.2	3.9	4.7	5.7	5.7	7.1	8.5	10.2	11.4	12.9	15.4	19.3	23.2	25.7	30.9	38.6	46.3	50.0	4.90	
				N.m	0.09	0.11	0.15	0.19	0.23	0.28	0.31	0.39	0.46	0.56	0.56	0.70	0.84	1.00	1.12	1.26	1.51	1.89	2.27	2.52	3.03	3.78	4.54	4.90		
	220/240		50	kgfcm	0.8	0.9	1.3	1.5	1.9	2.3	2.5	3.1	3.8	4.5	4.5	5.7	6.8	8.1	9.1	10.2	12.3	15.3	18.4	20.5	24.6	30.7	36.8	40.9	4.90	
				N.m	0.07	0.09	0.12	0.15	0.18	0.22	0.25	0.31	0.37	0.44	0.44	0.55	0.67	0.80	0.89	1.00	1.20	1.50	1.80	2.01	2.41	3.01	3.61	4.01		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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.

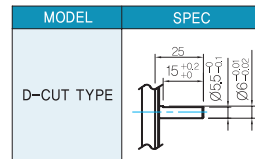
### Dimensions

#### MOTOR ONLY

MOTOR MODEL: 7SRDD□-6 (NO FAN)



#### MOTOR OUTPUT SHAFT

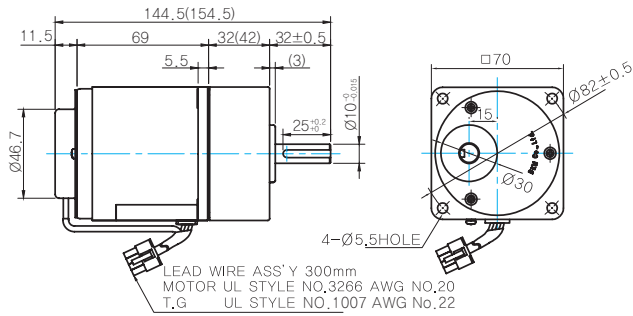


## GEARED MOTOR

### G TYPE GEARBOX

● MOTOR MODEL:  
7SRDG□-6G (NO FAN)

● GEARBOX MODEL:  
7GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

GEARBOX	

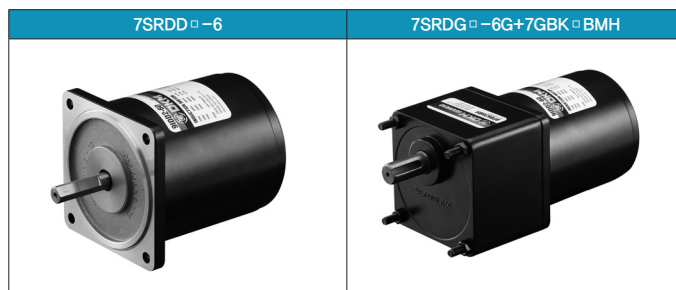
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	0.93
GEAR BOX	
7GBK3BMH - 7GBK18BMH	0.38
7GBK20BMH - 7GBK40BMH	0.48
7GBK50BMH - 7GBK200BMH	0.53

### 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

## Motor Images



# B AC Motors

S.C. Reversible Motor 10W (□ 70mm)

## 10W Speed Control Reversible Motor 10W(□ 70mm)

### Motor Specification

Model 7SRDG*-10G: Gear Type Shaft 7SRDD*-10: 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		
Lead Wire Type							kgfcm	N.m	kgfcm	N.m	kgfcm	N.m	
7SRDG1(A)-10G	10	1ϕ110	60	4	30min.	90-1700	0.60	0.060	0.75	0.075	0.42	0.042	3.5 / 250
7SRDG2(D)-10G	10	1ϕ220	60	4	30min.	90-1700	0.60	0.060	0.75	0.075	0.42	0.042	1.2 / 450
7SRDGE-10G	10	1ϕ220	50	4	30min.	90-1400	0.58	0.058	0.74	0.074	0.41	0.041	1.2 / 450
		0.62					0.062	0.76	0.076	0.42	0.042		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

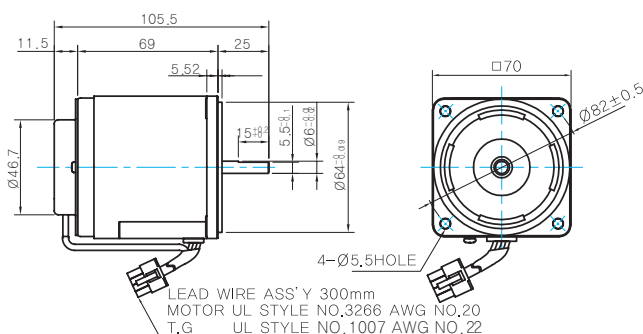
Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
7SRDG*-10G	7GBK □ BMH	1200	110	60	kgfcm N.m	1.8 0.18	2.2 0.21	3.0 0.30	3.6 0.36	4.6 0.45	5.5 0.54	6.1 0.60	7.6 0.74	9.1 0.89	10.9 1.07	11.0 1.07	13.7 1.34	16.4 1.61	19.7 1.93	21.9 2.15	24.8 2.43	29.7 2.91	37.1 3.64	44.6 4.37	49.5 4.85	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90			
						220/240	50	kgfcm N.m	1.8 0.18	2.2 0.21	3.0 0.30	3.6 0.36	4.5 0.44	5.4 0.53	6.0 0.59	7.5 0.73	9.0 0.88	10.8 1.06	10.8 1.06	13.5 1.32	16.2 1.59	19.4 1.91	21.6 2.12	24.4 2.39	29.3 2.87	36.6 3.59	44.0 4.31	48.8 4.79	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90
								kgfcm N.m	1.0 0.10	1.2 0.12	1.7 0.17	2.0 0.20	2.6 0.25	3.1 0.30	3.4 0.33	4.3 0.42	5.1 0.50	6.1 0.60	6.1 0.60	7.7 0.75	9.2 0.90	11.0 1.08	12.3 1.20	13.9 1.36	16.6 1.63	20.8 2.04	24.9 2.44	27.7 2.72	33.3 3.26	41.6 4.07	49.9 4.89	50.0 4.90
		90	110	60	kgfcm N.m	1.0 0.10	1.2 0.12	1.7 0.17	2.0 0.20	2.6 0.25	3.1 0.30	3.4 0.33	4.3 0.42	5.1 0.50	6.1 0.60	6.1 0.60	7.7 0.75	9.2 0.90	11.0 1.08	12.3 1.20	13.9 1.36	16.6 1.63	20.8 2.04	24.9 2.44	27.7 2.72	33.3 3.26	41.6 4.07	49.9 4.89	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90
					kgfcm N.m	1.0 0.10	1.2 0.12	1.7 0.17	2.0 0.20	2.6 0.25	3.1 0.30	3.4 0.33	4.3 0.42	5.1 0.50	6.1 0.60	6.1 0.60	7.7 0.75	9.2 0.90	11.0 1.08	12.3 1.20	13.9 1.36	16.6 1.63	20.8 2.04	24.9 2.44	27.7 2.72	33.3 3.26	41.6 4.07	49.9 4.89	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90
					kgfcm N.m	1.0 0.10	1.2 0.12	1.7 0.17	2.0 0.20	2.5 0.24	3.0 0.29	3.3 0.33	4.2 0.41	5.0 0.49	6.0 0.59	6.0 0.59	7.5 0.73	9.0 0.88	10.8 1.06	12.0 1.17	13.5 1.33	16.2 1.59	20.3 1.99	24.4 2.39	27.1 2.65	32.5 3.18	40.6 3.98	48.7 4.77	50.0 4.90	50.0 4.90	50.0 4.90	50.0 4.90

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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: 7SRDD□-10 (NO FAN)



#### MOTOR OUTPUT SHAFT

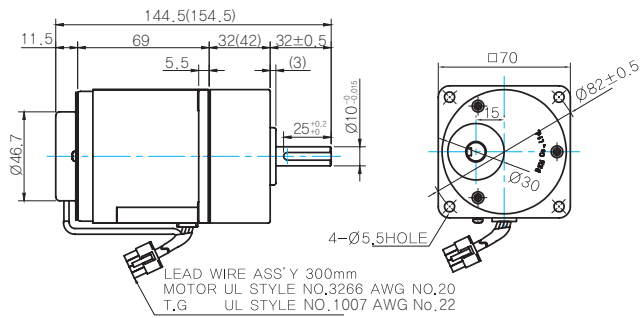
MODEL	SPEC
D-CUT TYPE	

## GEARED MOTOR

### G TYPE GEARBOX

- MOTOR MODEL:  
7SRDG□-10G (NO FAN)

- GEARBOX MODEL:  
7GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

GEARBOX	

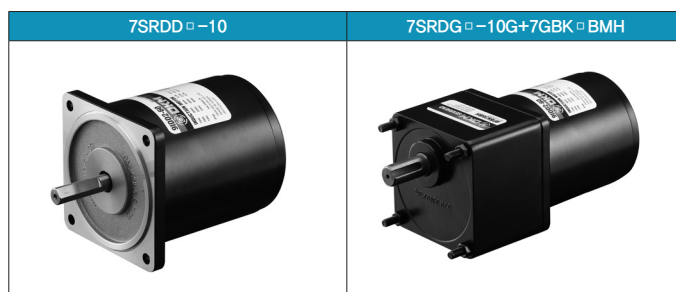
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	0,93
GEAR BOX	
7GBK3BMH - 7GBK18BMH	0,38
7GBK20BMH - 7GBK40BMH	0,48
7GBK50BMH - 7GBK200BMH	0,53

### 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

## Motor Images





# B AC Motors

S.C. Reversible Motor 15W (□ 70mm)

## 15W Speed Control Reversible Motor 15W(□ 70mm)

### Motor Specification

Model 7SRDG*-15G: Gear Type Shaft 7SRDD*-15: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
7SRDG1(A)-15G	15	1φ110	60	4	30min.	90-1700	1.00	0.100	1.35	0.135	0.55	0.055	6.0 / 250
7SRDG2(D)-15G	15	1φ220	60	4	30min.	90-1700	1.00	0.100	1.35	0.135	0.55	0.055	1.5 / 450
7SRDGE-15G	15	1φ220	50	4	30min.	90-1400	0.80	0.080	1.00	0.100	0.53	0.053	1.5 / 450
		1φ240					1.00	0.100	1.20	0.120	0.57	0.057	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

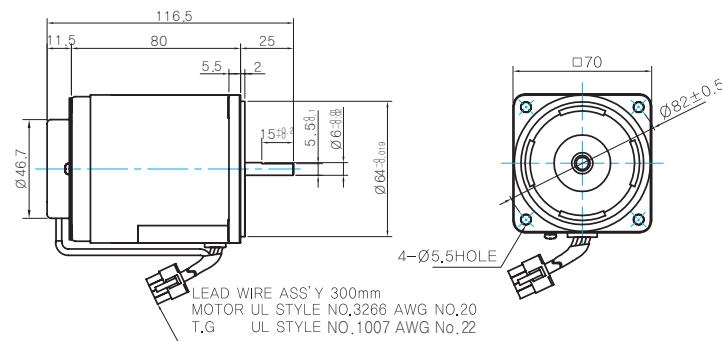
Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
7SRDG*-15G	7GBK □ BMH	1200	110	60	kgfcm	3.3	3.9	5.5	6.6	8.2	9.8	10.9	13.7	16.4	19.7	19.7	24.6	29.6	35.5	39.4	44.6	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	
					N.m	0.32	0.39	0.54	0.64	0.80	0.96	1.07	1.34	1.61	1.93	1.93	2.41	2.90	3.48	3.86	4.37	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90
			220/240	50	kgfcm	2.4	2.9	4.1	4.9	6.1	7.3	8.1	10.1	12.2	14.6	14.6	18.3	21.9	26.3	29.2	33.0	39.6	49.5	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
		N.m	0.24	0.29	0.40	0.48	0.60	0.71	0.79	0.99	1.19	1.43	1.43	1.79	2.15	2.58	2.86	3.23	3.88	4.85	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	
		90	110	60	kgfcm	1.3	1.6	2.2	2.7	3.3	4.0	4.5	5.6	6.7	8.0	8.0	10.0	12.0	14.5	16.1	18.2	21.8	27.2	32.7	36.3	43.6	50.0	50.0	50.0	50.0	50.0
					N.m	0.13	0.16	0.22	0.26	0.33	0.39	0.44	0.55	0.65	0.79	0.79	0.98	1.18	1.42	1.57	1.78	2.13	2.67	3.20	3.56	4.27	4.90	4.90	4.90	4.90	4.90
220/240	50		kgfcm	1.3	1.5	2.1	2.6	3.2	3.9	4.3	5.4	6.4	7.7	9.7	9.7	11.6	13.9	15.5	17.5	21.0	26.2	31.5	35.0	42.0	50.0	50.0	50.0	50.0	50.0		
N.m	0.13	0.15	0.21	0.25	0.32	0.38	0.42	0.53	0.63	0.76	0.76	0.95	1.14	1.36	1.52	1.71	2.06	2.57	3.09	3.43	4.11	4.90	4.90	4.90	4.90	4.90	4.90	4.90			

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

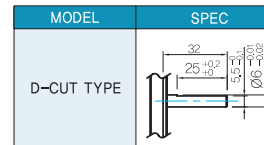
### Dimensions

#### MOTOR ONLY

- MOTOR MODEL: 7SRDD□-15 (NO FAN)



- MOTOR OUTPUT SHAFT

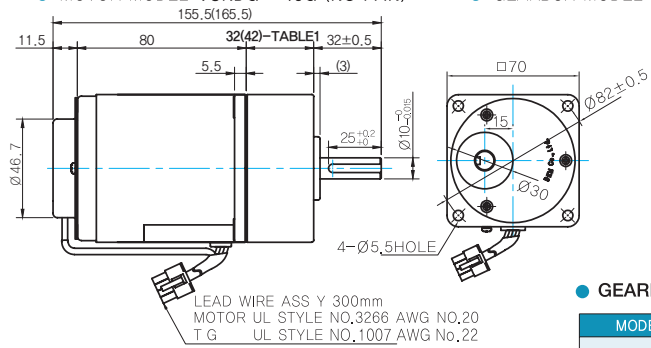


## GEARED MOTOR

### G TYPE GEARBOX

● MOTOR MODEL: 7SRDG□-15G (NO FAN)

● GEARBOX MODEL: 7GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

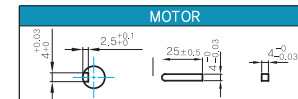
### WEIGHT

PART	WEIGHT(Kg)
MOTOR	1.20
7GBK3BMH ~ 7GBK18BMH	0.38
7GBK20BMH ~ 7GBK40BMH	0.48
7GBK50BMH ~ 7GBK200MH	0.53

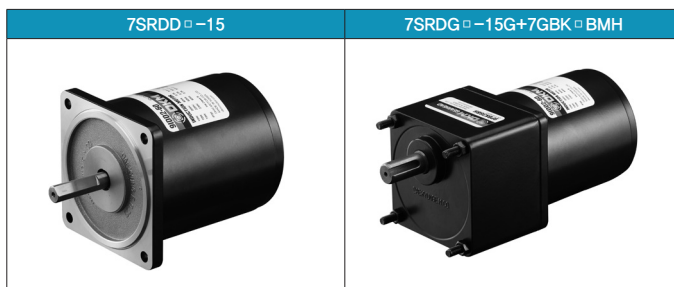
### 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

### KEY SPEC



## Motor Images



# B AC Motors

S.C. Reversible Motor 15W (□ 80mm)

## 15W Speed Control Reversible Motor 15W(□ 80mm)

### Motor Specification

Model 8SRDG*-15□ : Gear Type Shaft 8SRDD*-15□ : D-Cut 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	
8SRDG1(A)-15□	15	1φ110	60	4	30min.	90-1700	0.85	0.085	1.40	0.140	0.50	0.050	6.0 / 450
8SRDG2(D)-15□	15	1φ220	60	4	30min.	90-1700	0.85	0.085	1.40	0.140	0.50	0.050	1.5 / 450
8SRDGE-15□	15	1φ220	50	4	30min.	90-1400	0.75	0.075	1.30	0.130	0.48	0.048	1.5 / 450
		1φ240					0.85	0.085	1.40	0.140	0.52	0.052	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	360			
8SRDG*-15G	8GBK □ BMH	1200	110	60	kgfcm	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0		
					N.m	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61	4.01	4.53	5.43	6.79	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	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.3	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	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61	4.01	4.53	5.43	6.79	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	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.3	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	80.0
		N.m	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61	4.01	4.53	5.43	6.79	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	7.84
	90	110	60	kgfcm	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	11.0	13.1	14.6	16.5	19.8	24.8	29.7	33.0	39.6	49.5	59.4	66.0	80.0	80.0	80.0	80.0	80.0	80.0	
				N.m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.72	0.89	1.07	1.29	1.43	1.62	1.94	2.43	2.91	3.23	3.88	4.85	5.82	6.47	7.84	7.84	7.84	7.84	7.84	7.84	
				kgfcm	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	11.0	13.1	14.6	16.5	19.8	24.8	29.7	33.0	39.6	49.5	59.4	66.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.72	0.89	1.07	1.29	1.43	1.62	1.94	2.43	2.91	3.23	3.88	4.85	5.82	6.47	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	
		kgfcm	1.3	1.5	2.1	2.5	3.2	3.8	4.2	5.3	6.3	7.6	7.6	9.5	11.4	13.7	15.2	17.2	20.6	25.7	30.9	34.3	41.2	51.5	61.8	68.6	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	
		N.m	0.12	0.15	0.21	0.25	0.31	0.37	0.41	0.52	0.62	0.74	0.74	0.93	1.12	1.34	1.49	1.68	2.02	2.52	3.03	3.36	4.04	5.05	6.05	6.73	7.84	7.84	7.84	7.84	7.84	7.84	7.84		

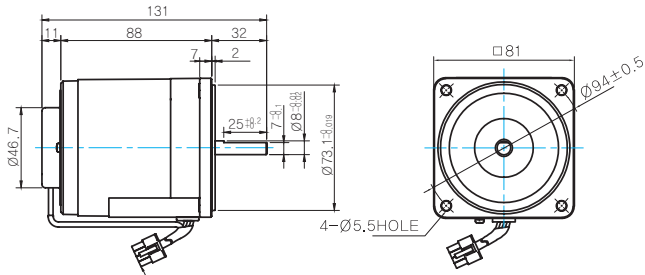
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
8SRDG*-15W	8WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm	11.5	13.4	16.2	18.6	24.5	27.7	32.3	42.0	46.2
					N.m	1.13	1.32	1.58	1.83	2.40	2.72	3.16	4.12	4.53
					kgfcm	11.6	13.9	17.4	20.9	29.1	34.9	41.8	58.1	69.7
		N.m	1.14	1.37	1.71	2.05	2.85	3.42	4.10	5.69	6.83			
		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	4.1	4.8	5.8	6.7	8.8	9.9	11.5	15.0	16.5	
				N.m	0.40	0.47	0.57	0.65	0.86	0.97	1.13	1.47	1.62	
				kgfcm	4.1	4.8	5.8	6.7	8.8	9.9	11.5	15.0	16.5	
		N.m	0.40	0.47	0.57	0.65	0.86	0.97	1.13	1.47	1.62			
		kgfcm	4.3	5.0	6.0	6.9	9.1	10.3	12.0	15.6	17.2			
		N.m	0.42	0.49	0.59	0.68	0.89	1.01	1.17	1.53	1.68			

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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: 8SRDD□-15 (NO FAN)



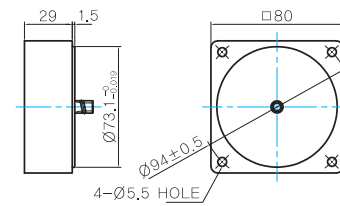
LEAD WIRE ASS Y 300mm  
 MOTOR UL STYLE NO. 3271 AWG NO. 20  
 T.G UL STYLE NO. 1007 AWG NO. 22

### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### INTER-DECIMAL GEARBOX

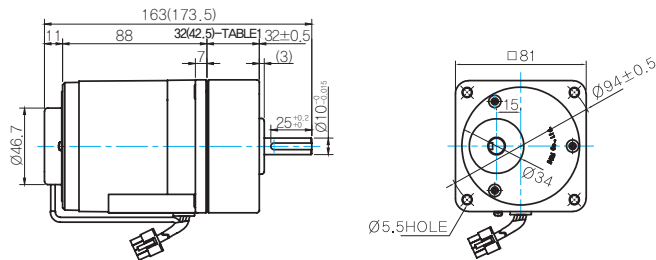
- MODEL: 8XD10□□



## GEARED MOTOR

### G TYPE GEARBOX

- MOTOR MODEL: 8SRDG□-15G (NO FAN)
- GEARBOX MODEL: 8GBK□BMH



LEAD WIRE ASS Y 300mm  
 MOTOR UL STYLE NO. 3271 AWG NO. 20  
 T.G UL STYLE NO. 1007 AWG NO. 22

### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

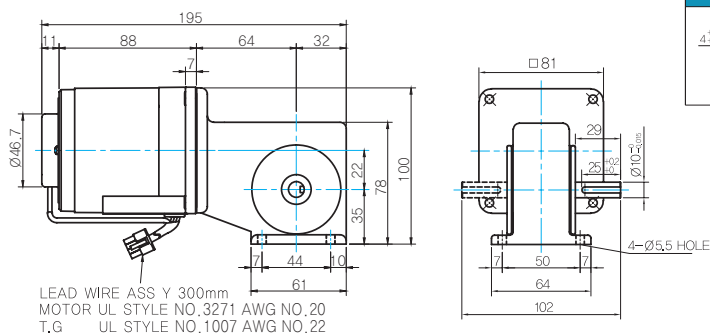
GEARBOX	

### 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

### W TYPE GEARBOX

- MOTOR MODEL: 8SRDG□-15W (NO FAN)
- GEARBOX MODEL: 8WD□BL/BR/BRL



LEAD WIRE ASS Y 300mm  
 MOTOR UL STYLE NO. 3271 AWG NO. 20  
 T.G UL STYLE NO. 1007 AWG NO. 22

### KEY SPEC

GEARBOX	

### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	1.66	
GEAR BOX	8GBK3BMH ~ 8GBK18BMH	0.56
	8GBK20BMH ~ 8GB40BMH	0.65
	8GBK50BMH ~ 8GBK360BMH	0.72
	8WD□BL/BR/BRL	0.68
	8XD10□□	0.45

# B AC Motors

S.C. Reversible Motor 15W (□ 80mm)

## Motor Images



# 25W

Speed Control  
Reversible Motor  
25W(□ 80mm)

## Motor Specification

Model 8SRDG*-25 □ : Gear Type Shaft 8SRDD*-25: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
8SRDG1(A)-25 □	25	1 ∅110	60	4	30min.	90-1700	1.80	0.180	2.30	0.230	0.60	0.060	10.0 / 250
8SRDG2(D)-25 □	25	1 ∅220	60	4	30min.	90-1700	1.80	0.180	2.30	0.230	0.60	0.060	2.5 / 450
8SRDGE-25 □	25	1 ∅220	50	4	30min.	90-1400	1.60	0.160	2.10	0.210	0.55	0.055	2.5 / 450
		1 ∅240					1.80	0.180	2.30	0.230	0.65	0.065	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	10	12.5	15	18	20	25	30	36
8SRDG*-25G	8GBK □ BMH	1200	110	60	kgfcm	5.6	6.7	9.3	11.2	14.0	16.8	18.6	23.3	27.9	33.5	33.6	42.0	50.4	60.4
					N.m	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.28	2.74	3.29	3.29	4.11	4.94	5.92
			220	60	kgfcm	5.6	6.7	9.3	11.2	14.0	16.8	18.6	23.3	27.9	33.5	33.6	42.0	50.4	60.4
		220/240	50	N.m	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.28	2.74	3.29	3.29	4.11	4.94	5.92	
		90	110	60	kgfcm	1.5	1.7	2.4	2.9	3.6	4.4	4.9	6.1	7.3	8.7	8.8	11.0	13.1	15.8
					N.m	0.14	0.17	0.24	0.29	0.36	0.43	0.48	0.60	0.71	0.86	0.86	1.07	1.29	1.55
220	60		kgfcm	1.5	1.7	2.4	2.9	3.6	4.4	4.9	6.1	7.3	8.7	8.8	11.0	13.1	15.8		
220/240	50	N.m	0.14	0.17	0.24	0.29	0.36	0.43	0.48	0.60	0.71	0.86	0.86	1.07	1.29	1.55			
220/240	50	kgfcm	1.6	1.9	2.6	3.2	3.9	4.7	5.3	6.6	7.9	9.5	9.5	11.9	14.2	17.1			
N.m	0.15	0.19	0.26	0.31	0.39	0.46	0.52	0.64	0.77	0.93	0.93	1.16	1.40	1.67					

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	40	50	60	75	90	100	120	150	180	200	250	300	360
8SRDG*-25G	8GBK □ BMH	1200	110	60	kgfcm	67.2	75.9	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
					N.m	6.58	7.44	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
			220	60	kgfcm	67.2	75.9	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		220/240	50	N.m	6.58	7.44	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	17.5	19.8	23.8	29.7	35.6	39.6	47.5	59.4	71.3	79.2	80.0	80.0	80.0
					N.m	1.72	1.94	2.33	2.91	3.49	3.88	4.66	5.82	6.99	7.76	7.84	7.84	7.84
220	60		kgfcm	17.5	19.8	23.8	29.7	35.6	39.6	47.5	59.4	71.3	79.2	80.0	80.0			
220/240	50	N.m	1.72	1.94	2.33	2.91	3.49	3.88	4.66	5.82	6.99	7.76	7.84	7.84				
220/240	50	kgfcm	19.0	21.5	25.7	32.2	38.6	42.9	51.5	64.4	77.2	80.0	80.0	80.0				
N.m	1.86	2.10	2.52	3.15	3.78	4.20	5.05	6.31	7.57	7.84	7.84	7.84	7.84					

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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 25W (□ 80mm)

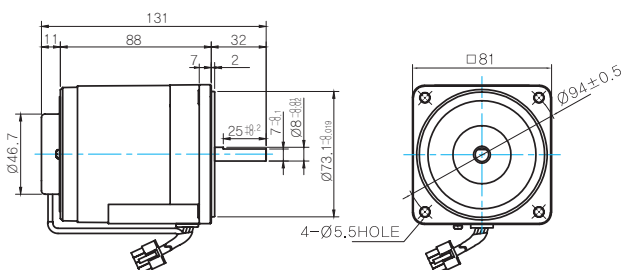
### Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
8SRDG*-25W	8WD□BL/□BR/□BRL	1200	110	60	kgfcm N.m	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44
			220	60	kgfcm N.m	19.1 1.87	22.9 2.24	28.6 2.81	34.4 3.37	47.7 4.68	57.3 5.61	68.7 6.73	95.5 9.35	81.6 8.00
			220/240	50	kgfcm N.m	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44
		90	110	60	kgfcm N.m	4.9 0.48	5.8 0.56	6.9 0.68	8.0 0.78	10.5 1.03	11.9 1.16	13.8 1.35	18.0 1.76	19.8 1.94
			220	60	kgfcm N.m	4.9 0.48	5.8 0.56	6.9 0.68	8.0 0.78	10.5 1.03	11.9 1.16	13.8 1.35	18.0 1.76	19.8 1.94
			220/240	50	kgfcm N.m	5.3 0.52	6.2 0.61	7.5 0.74	8.7 0.85	11.4 1.11	12.9 1.26	15.0 1.47	19.5 1.91	21.5 2.10

### Dimensions

#### MOTOR ONLY

- MOTOR MODEL: 8SRDD□-25 (NO FAN)



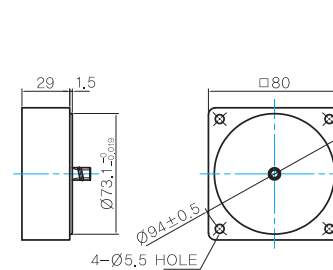
LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T.G UL STYLE NO.1007 AWG NO.22

#### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

#### INTER-DECIMAL GEARBOX

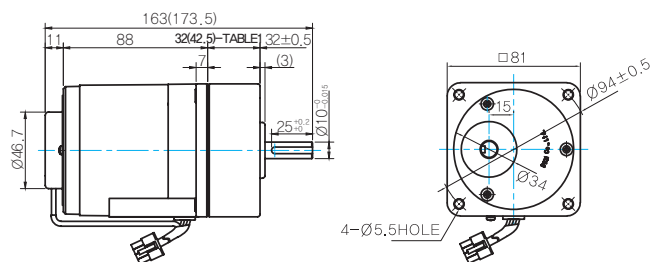
- MODEL: 8XD10□□



### GEARED MOTOR

#### G TYPE GEARBOX

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



LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T.G UL STYLE NO.1007 AWG NO.22

#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### KEY SPEC

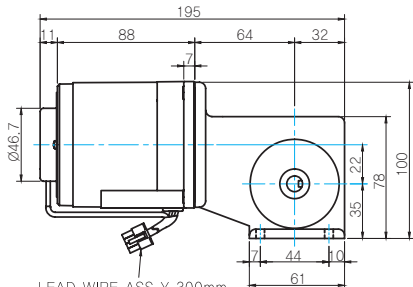
GEARBOX

#### 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

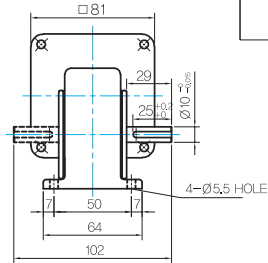
### W TYPE GEARBOX

● MOTOR MODEL:  
8SRDG□-25W (NO FAN)

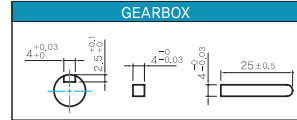


LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO. 3271 AWG NO. 20  
T.G UL STYLE NO. 1007 AWG NO. 22

● GEARBOX MODEL:  
8WD□BL/BR/BRL



● KEY SPEC



### WEIGHT

PART		WEIGHT(Kg)
MOTOR		1.66
GEAR BOX	8GBK3BMH ~ 8GBK18BMH	0.56
	8GBK20BMH ~ 8GBK40BMH	0.65
	8GBK50BMH ~ 8GBK360BMH	0.72
	8WD□BL/BR/BRL	0.68
	8XD10□□	0.45

### Motor Images





# B AC Motors

## S.C. Reversible Motor 40W (□ 90mm)

# 40W

Speed Control  
Reversible Motor  
40W(□ 90mm)

### Motor Specification

Model 9SRDG*-40□ : Gear Type Shaft 9SRDD*-40: D-Cut Type Shaft 9SRDK*-40: 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	
9SRDG1(A)-40□	40	1φ 110	60	4	30min.	90-1700	3.40	0.340	3.00	0.300	0.85	0.085	16.0 / 250
9SRDG2(D)-40□	40	1φ 220	60	4	30min.	90-1700	3.30	0.330	3.00	0.300	0.85	0.085	4.0 / 450
9SRDGE-40□	40	1φ 220	50	4	30min.	90-1400	3.00	0.300	2.60	0.260	0.80	0.080	4.0 / 450
		1φ 240					3.30	0.330	3.20	0.320	0.90	0.090	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200				
9SRDG*-40G	9GBK □ BMH	1200	110	60	kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	30.4	36.5	43.7	43.8	54.8	65.7	78.8	87.6	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
					N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.98	3.57	4.29	4.29	5.37	6.44	7.73	8.58	9.70	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	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	30.4	36.5	43.7	43.8	54.8	65.7	78.8	87.6	99.0	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	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.98	3.57	4.29	4.29	5.37	6.44	7.73	8.58	9.70	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	
		kgfcm	4.2	6.3	7.6	10.5	12.6	15.8	19.0	21.1	26.3	31.6	37.9	38.0	47.5	56.9	68.3	75.9	85.8	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	0.41	0.62	0.74	1.03	1.24	1.55	1.86	2.06	2.58	3.10	3.71	3.72	4.65	5.58	6.70	7.44	8.41	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	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	8.6	10.3	12.4	12.4	15.5	18.6	22.3	24.8	28.1	33.7	33.7	42.1	50.5	56.1	67.3	84.2	100.0	100.0	100.0	100.0		
				N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.84	1.01	1.21	1.22	1.52	1.82	2.19	2.43	2.75	3.30	3.30	4.12	4.95	5.50	6.60	8.25	9.80	9.80	9.80	9.80		
				kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	8.6	10.3	12.4	12.4	15.5	18.6	22.3	24.8	28.1	33.7	33.7	42.1	50.5	56.1	67.3	84.2	100.0	100.0	100.0	100.0	100.0	
		N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.84	1.01	1.21	1.22	1.52	1.82	2.19	2.43	2.75	3.30	3.30	4.12	4.95	5.50	6.60	8.25	9.80	9.80	9.80	9.80	9.80			
		kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.4	26.4	31.7	39.6	39.6	47.5	52.8	63.4	79.2	95.0	100.0	100.0	100.0	100.0			
		N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.72	2.06	2.29	2.59	3.10	3.88	4.66	5.17	6.21	7.76	9.31	9.80	9.80	9.80	9.80	9.80			

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SRDG*-40W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	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
					kgfcm	24.9	29.9	37.4	44.8	62.3	74.7	89.6	124.5	122.4
		N.m	2.44	2.93	3.66	4.39	6.10	7.32	8.78	12.20	12.00			
		kgfcm	26.2	30.7	37.0	42.6	56.0	63.4	73.7	96.0	105.6			
		N.m	2.57	3.01	3.62	4.18	5.49	6.21	7.23	9.41	10.35			
90	110	60	kgfcm	7.0	8.2	9.8	11.3	14.9	16.8	19.6	25.5	28.1		
			N.m	0.68	0.80	0.96	1.11	1.46	1.65	1.92	2.50	2.75		
			kgfcm	7.0	8.2	9.8	11.3	14.9	16.8	19.6	25.5	28.1		
N.m	0.68	0.80	0.96	1.11	1.46	1.65	1.92	2.50	2.75					
kgfcm	7.4	8.6	10.4	12.0	15.8	17.8	20.7	27.0	29.7					
N.m	0.72	0.85	1.02	1.17	1.54	1.75	2.03	2.65	2.91					

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
9SRDG* -40P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	59.4
					N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	5.82
			220	60	kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	59.4
		N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	5.82			
		220/ 240	50	kgfcm	4.2	6.3	7.6	10.5	12.6	15.8	19.0	21.1	23.7	28.5	34.2	38.0	42.9	51.5	
		N.m	0.41	0.62	0.74	1.03	1.24	1.55	1.86	2.06	2.33	2.79	3.35	3.72	4.20	5.05			
90	60	kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.3	11.2	12.4	14.0	16.8			
		N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.76	0.91	1.09	1.22	1.37	1.65			
		220	60	kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.3	11.2	12.4	14.0	16.8	
N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.76	0.91	1.09	1.22	1.37	1.65					
220/ 240	50	kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	7.3	8.8	10.5	11.7	13.2	15.8			
N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.72	0.86	1.03	1.14	1.29	1.55					

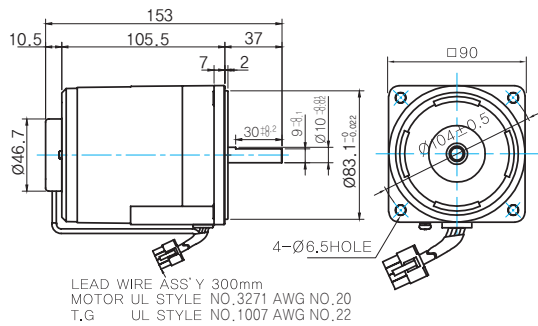
  

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200
9SRDG* -40P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm	71.3	79.2	99.0	118.8	132.8	159.3	177.0	200.0	200.0	200.0	200.0
					N.m	6.99	7.76	9.70	11.64	13.01	15.61	17.35	19.60	19.60	19.60	19.60
			220	60	kgfcm	71.3	79.2	99.0	118.8	132.8	159.3	177.0	200.0	200.0	200.0	200.0
		N.m	6.99	7.76	9.70	11.64	13.01	15.61	17.35	19.60	19.60	19.60	19.60			
		220/ 240	50	kgfcm	61.8	68.6	85.8	103.0	115.1	138.1	153.4	184.1	200.0	200.0	200.0	
		N.m	6.05	6.73	8.41	10.09	11.27	13.53	15.03	18.04	19.60	19.60	19.60			
90	60	kgfcm	20.2	22.4	28.1	33.7	37.6	45.1	50.2	60.2	75.2	90.3	100.3			
		N.m	1.98	2.20	2.75	3.30	3.69	4.42	4.91	5.90	7.37	8.85	9.83			
		220	60	kgfcm	20.2	22.4	28.1	33.7	37.6	45.1	50.2	60.2	75.2	90.3	100.3	
N.m	1.98	2.20	2.75	3.30	3.69	4.42	4.91	5.90	7.37	8.85	9.83					
220/ 240	50	kgfcm	19.0	21.1	26.4	31.7	35.4	42.5	47.2	56.6	70.8	85.0	94.4			
N.m	1.86	2.07	2.59	3.10	3.47	4.16	4.63	5.55	6.94	8.33	9.25					

## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 9SRDD □ -40 (NO FAN)

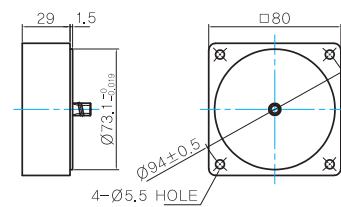


### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	
KEY TYPE	

### INTER-DECIMAL GEARBOX

- MODEL: 9XD10 □ □



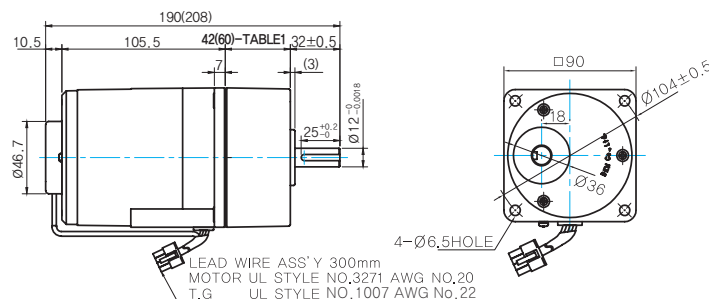
### KEY SPEC

GEARBOX	

### GEARED MOTOR

### G TYPE GEARBOX

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



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

GEARBOX	

### 42(60)-Table1

SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK18BMH
60	9GBK20BMH - 9GBK200BMH

# B AC Motors

## S.C. Reversible Motor 40W (□90mm)

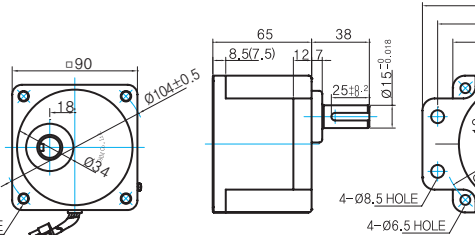
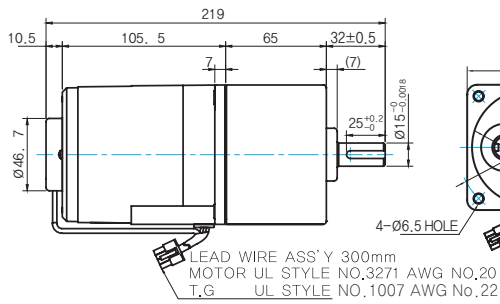
### P TYPE GEARBOX

MOTOR MODEL:  
9SRDG □-40G (NO FAN)

GEARBOX MODEL:  
9PBK □BH

GEARBOX MODEL:  
9PFK □BH

GEARBOX OUTPUT SHAFT



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

KEY SPEC

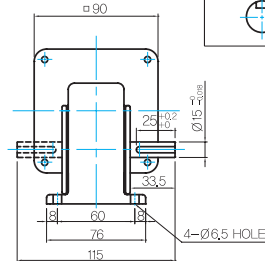
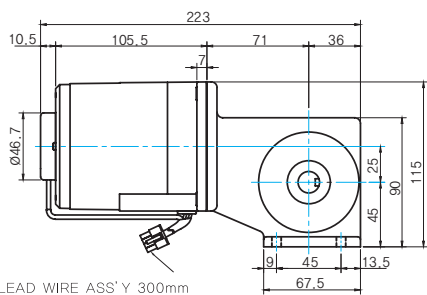
GEARBOX

### W TYPE GEARBOX

MOTOR MODEL:  
9SRDG □-40W (NO FAN)

GEARBOX MODEL:  
9WD □BL/BR/BRL

KEY SPEC

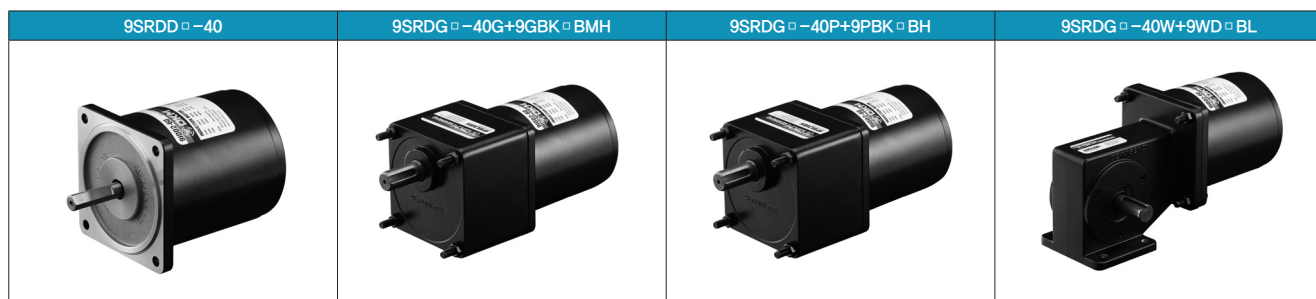


GEARBOX

### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2,55	
GEAR BOX	9GBK2BMH ~ 9GBK18BMH	0,78
	9GBK20BMH ~ 9GBK40BMH	1,1
	9GBK50BMH ~ 9GBK200BMH	1,2
	9PB(FK)2BH ~ 9PB(FK)10BH	1,28
	9PB(FK)12.5BH ~ 9PB(FK)20BH	1,3
	9PB(FK)25BH ~ 9PB(FK)60BH	1,45
	9PB(FK)75BH ~ 9PB(FK)200BH	1,47
	9WD □BL/BR/BRL	1,0
	9XD10 □□	0,6

## Motor Images



## S.C. Reversible Motor 60W (□ 90mm)

# 60W

Speed Control  
Reversible Motor  
60W(□ 90mm)

### Motor Specification

Model 9SRDG*–60F2□ : Gear Type Shaft 9SRDD*–60F2: D–Cut Type Shaft 9SRDK*–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	
Lead Wire Type													
9SRDG1(A)–60F2□	60	1 ∅110	60	4	30min.	90–1700	3.20	0.320	6.10	0.610	2.80	0.280	20.0 / 250
9SRDG2(D)–60F2□	60	1 ∅220	60	4	30min.	90–1700	3.80	0.380	6.50	0.650	3.00	0.300	6.0 / 450
9SRDGE–60F2□	60	1 ∅220	50	4	30min.	90–1400	5.20	0.520	5.20	0.520	1.00	0.100	6.0 / 450
		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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D–Cut Type Shaft is for using the 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	20
9SRDG*–60F2P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm N.m	8.7 0.86	13.1 1.29	15.7 1.54	21.9 2.14	26.2 2.57	32.8 3.21	39.4 3.86	43.7 4.29	49.3 4.83	59.1 5.79	71.0 6.95	78.8 7.73
			220	60	kgfcm N.m	8.6 0.84	12.9 1.26	15.5 1.51	21.5 2.10	25.8 2.52	32.2 3.16	38.6 3.79	42.9 4.21	48.4 4.74	58.0 5.69	69.6 6.82	77.4 7.58
			220/ 240	50	kgfcm N.m	8.4 0.83	12.6 1.24	15.2 1.49	21.1 2.06	25.3 2.48	31.6 3.10	37.9 3.71	42.1 4.13	47.5 4.65	56.9 5.58	68.3 6.70	75.9 7.44
		90	110	60	kgfcm N.m	4.5 0.44	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01
			220	60	kgfcm N.m	4.4 0.43	6.6 0.64	7.9 0.77	10.9 1.07	13.1 1.29	16.4 1.61	19.7 1.93	21.9 2.14	24.6 2.41	29.6 2.90	35.5 3.48	39.4 3.86
			220/ 240	50	kgfcm N.m	4.4 0.43	6.6 0.64	7.9 0.77	10.9 1.07	13.1 1.29	16.4 1.61	19.7 1.93	21.9 2.14	24.6 2.41	29.6 2.90	35.5 3.48	39.4 3.86

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200
9SRDG*–60F2P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm N.m	89.1 8.73	106.9 10.48	128.3 12.57	142.6 13.97	178.2 17.46	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	87.5 8.57	104.9 10.28	125.9 12.34	139.9 13.71	174.9 17.14	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	85.8 8.41	103.0 10.09	123.6 12.11	137.3 13.45	171.6 16.82	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	46.2 4.53	55.4 5.43	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	200.0 19.60	200.0 19.60	200.0 19.60
			220	60	kgfcm N.m	44.6 4.37	53.5 5.24	64.2 6.29	71.3 6.99	89.1 8.73	106.9 10.48	119.5 11.71	143.4 14.05	159.3 15.61	191.2 18.73	200.0 19.60	200.0 19.60	200.0 19.60
			220/ 240	50	kgfcm N.m	44.6 4.37	53.5 5.24	64.2 6.29	71.3 6.99	89.1 8.73	106.9 10.48	119.5 11.71	143.4 14.05	159.3 15.61	191.2 18.73	200.0 19.60	200.0 19.60	200.0 19.60

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
9SRDG*~60F2H	9HBK □ BH	1200	110	60	kgfcm N.m	13.1 1.29	15.7 1.54	21.9 2.14	26.2 2.57	32.8 3.21	39.4 3.86	43.7 4.29	49.3 4.83	59.1 5.79	71.0 6.95	78.8 7.73	89.1 8.73
			220	60	kgfcm N.m	12.9 1.26	15.5 1.51	21.5 2.10	25.8 2.52	32.2 3.16	38.6 3.79	42.9 4.21	48.4 4.74	58.0 5.69	69.6 6.82	77.4 7.58	87.5 8.57
			220/240	50	kgfcm N.m	12.6 1.24	15.2 1.49	21.1 2.06	25.3 2.48	31.6 3.10	37.9 3.71	42.1 4.13	47.5 4.65	56.9 5.58	68.3 6.70	75.9 7.44	85.8 8.41
	9HFK □ BH	90	110	60	kgfcm N.m	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01	46.2 4.53
			220	60	kgfcm N.m	6.6 0.64	7.9 0.77	10.9 1.07	13.1 1.29	16.4 1.61	19.7 1.93	21.9 2.14	24.6 2.41	29.6 2.90	35.5 3.48	39.4 3.86	44.6 4.37
			220/240	50	kgfcm N.m	6.6 0.64	7.9 0.77	10.9 1.07	13.1 1.29	16.4 1.61	19.7 1.93	21.9 2.14	24.6 2.41	29.6 2.90	35.5 3.48	39.4 3.86	44.6 4.37

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	190	200	
9SRDG*~60F2H	9HBK □ BH	1200	110	60	kgfcm N.m	106.9 10.48	128.3 12.57	142.6 13.97	178.2 17.46	213.8 20.96	239.0 23.42	286.7 28.10	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	104.9 10.28	125.9 12.34	139.9 13.71	174.9 17.14	209.9 20.57	234.5 22.98	281.4 27.58	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	103.0 10.09	123.6 12.11	137.3 13.45	171.6 16.82	205.9 20.18	230.1 22.55	276.1 27.06	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40
	9HFK □ BH	90	110	60	kgfcm N.m	55.4 5.43	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	247.8 24.28	297.4 29.14	300.0 29.40	
			220	60	kgfcm N.m	53.5 5.24	64.2 6.29	71.3 6.99	89.1 8.73	106.9 10.48	119.5 11.71	143.4 14.05	159.3 15.61	191.2 18.73	239.0 23.42	286.7 28.10	300.0 29.40	
			220/240	50	kgfcm N.m	53.5 5.24	64.2 6.29	71.3 6.99	89.1 8.73	106.9 10.48	119.5 11.71	143.4 14.05	159.3 15.61	191.2 18.73	239.0 23.42	286.7 28.10	300.0 29.40	

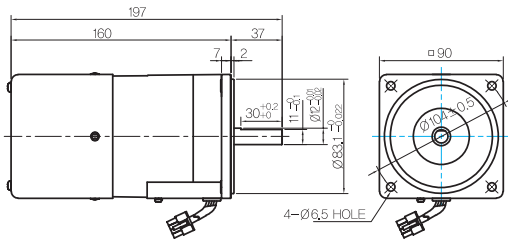
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SRDG*~60F2W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm N.m	44.3 4.34	51.8 5.08	62.4 6.11	71.9 7.05	94.5 9.26	106.9 10.48	124.4 12.19	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	43.5 4.26	50.9 4.99	61.2 6.00	70.6 6.92	92.8 9.09	104.9 10.28	122.1 11.97	142.9 14.00	122.4 12.00
			220/240	50	kgfcm N.m	47.6 4.66	55.7 5.46	67.0 6.57	77.3 7.57	101.5 9.95	114.8 11.25	133.6 13.10	142.9 14.00	122.4 12.00
		90	110	60	kgfcm N.m	23.0 2.25	26.9 2.63	32.3 3.17	37.3 3.66	49.0 4.80	55.4 5.43	64.5 6.32	84.0 8.23	92.4 9.06
			220	60	kgfcm N.m	22.1 2.17	25.9 2.54	31.2 3.06	36.0 3.52	47.3 4.63	53.5 5.24	62.2 6.10	81.0 7.94	89.1 8.73
			220/240	50	kgfcm N.m	23.8 2.33	27.8 2.73	33.5 3.28	38.6 3.79	50.8 4.97	57.4 5.63	66.8 6.55	87.0 8.53	95.7 9.38

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SRDG*~60F2WH	9WHD □ -030	1200	110	60	kgfcm N.m	18.8 1.84	27.2 2.67	35.0 3.43	49.2 4.83	62.2 6.10	71.3 6.99	82.9 8.13	102.0 9.99	116.6 11.43	129.6 12.70	132.7 13.00
			220	60	kgfcm N.m	18.4 1.81	26.7 2.62	34.3 3.37	48.3 4.74	61.1 5.98	70.0 6.86	81.4 7.98	100.1 9.81	114.5 11.22	127.2 12.47	132.7 13.00
			220/240	50	kgfcm N.m	20.2 1.98	29.2 2.86	37.6 3.68	52.9 5.18	66.8 6.55	76.6 7.50	89.1 8.73	109.5 10.73	125.3 12.28	139.2 13.64	132.7 13.00
		90	110	60	kgfcm N.m	12.2 1.19	17.6 1.73	22.7 2.22	31.9 3.13	40.3 3.95	46.2 4.53	53.8 5.27	66.1 6.48	75.6 7.41	84.0 8.23	98.6 9.66
			220	60	kgfcm N.m	11.7 1.15	17.0 1.67	21.9 2.14	30.8 3.02	38.9 3.81	44.6 4.37	51.8 5.08	63.7 6.24	72.9 7.14	81.0 7.94	95.0 9.31
			220/240	50	kgfcm N.m	12.6 1.24	18.3 1.79	23.5 2.30	33.1 3.24	41.8 4.09	47.9 4.69	55.7 5.46	68.4 6.71	78.3 7.67	87.0 8.53	102.1 10.00

## Dimensions

### MOTOR ONLY

- MOTOR MODEL:  
9SRDD□-60F2 (POWERFUL FAN)

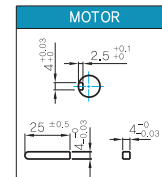


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- MOTOR OUTPUT SHAFT

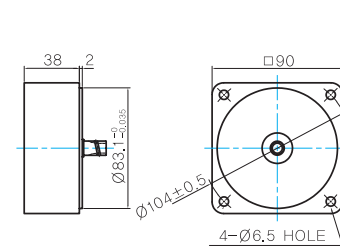
MODEL	SPEC
D-CUT TYPE	37 30 <sup>+0.03</sup> <sub>-0</sub> 11 <sup>+0.03</sup> <sub>-0</sub> Ø12 <sup>+0.03</sup> <sub>-0</sub>
9SRDD□-60F2	
KEY TYPE	37 25 <sup>+0.03</sup> <sub>-0</sub> Ø12 <sup>+0.03</sup> <sub>-0</sub>
9SRDK□-60F2	

- KEY SPEC



### INTER-DECIMAL GEARBOX

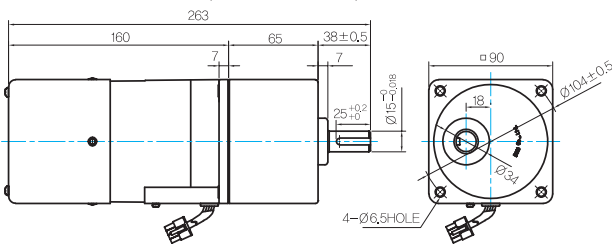
- MODEL: 9XD10□□



### GEARED MOTOR

#### P TYPE GEARBOX

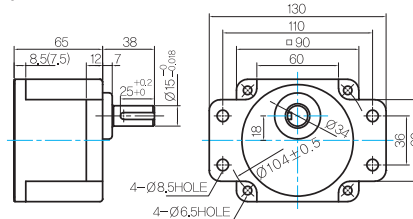
- MOTOR MODEL:  
9SRDG□-60F2P (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9PBK□BH

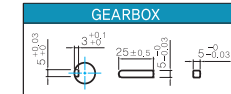
- GEARBOX MODEL:  
9PFK□BH



- GEARBOX OUTPUT SHAFT

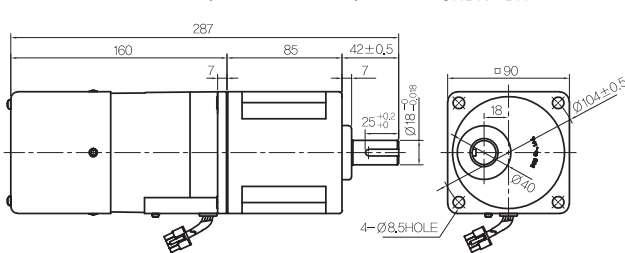
MODEL	SPEC
KEY TYPE	38 25 <sup>+0.2</sup> <sub>-0</sub> Ø15 <sup>+0.018</sup> <sub>-0</sub>
9PBK□BH	
9PFK□BH	

- KEY SPEC



#### H TYPE GEARBOX

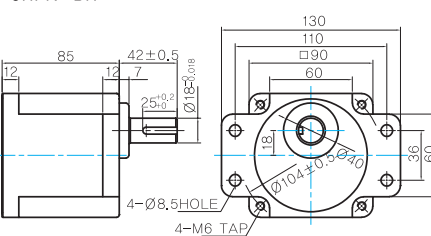
- MOTOR MODEL:  
9SRDG□-60F2H (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9HBK□BH

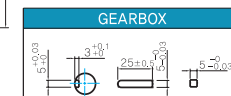
- GEARBOX MODEL:  
9HFK□BH



- GEARBOX OUTPUT SHAFT

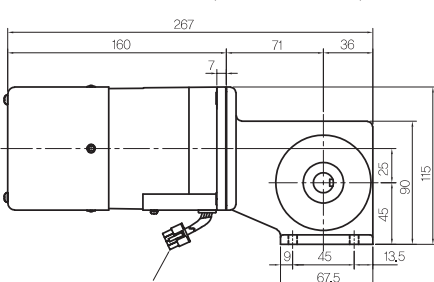
MODEL	SPEC
KEY TYPE	42 25 <sup>+0.2</sup> <sub>-0</sub> Ø18 <sup>+0.018</sup> <sub>-0</sub>
9HBK□BH	
9HFK□BH	

- KEY SPEC



#### W TYPE GEARBOX

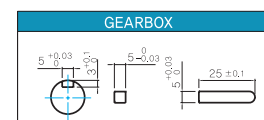
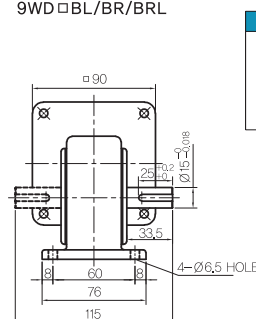
- MOTOR MODEL:  
9SRDG□-60F2W (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9WD□BL/BR/BRL

- KEY SPEC



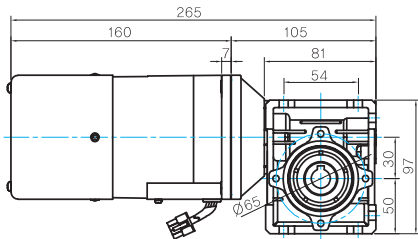
# B AC Motors

## S.C. Reversible Motor 60W (□ 90mm)

### Dimensions

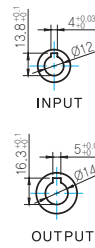
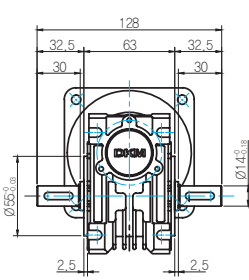
#### WH TYPE GEARBOX

MOTOR MODEL:  
9SRDG□-60F2WH (POWERFUL FAN)

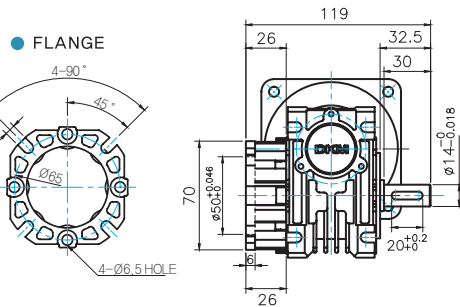
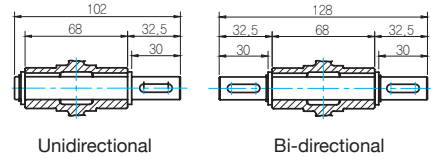


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T.G UL STYLE NO.1007 AWG No.22

GEARBOX MODEL:  
9WHD□-030

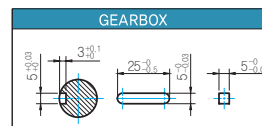


SHAFT



FLANGE

KEY SPEC

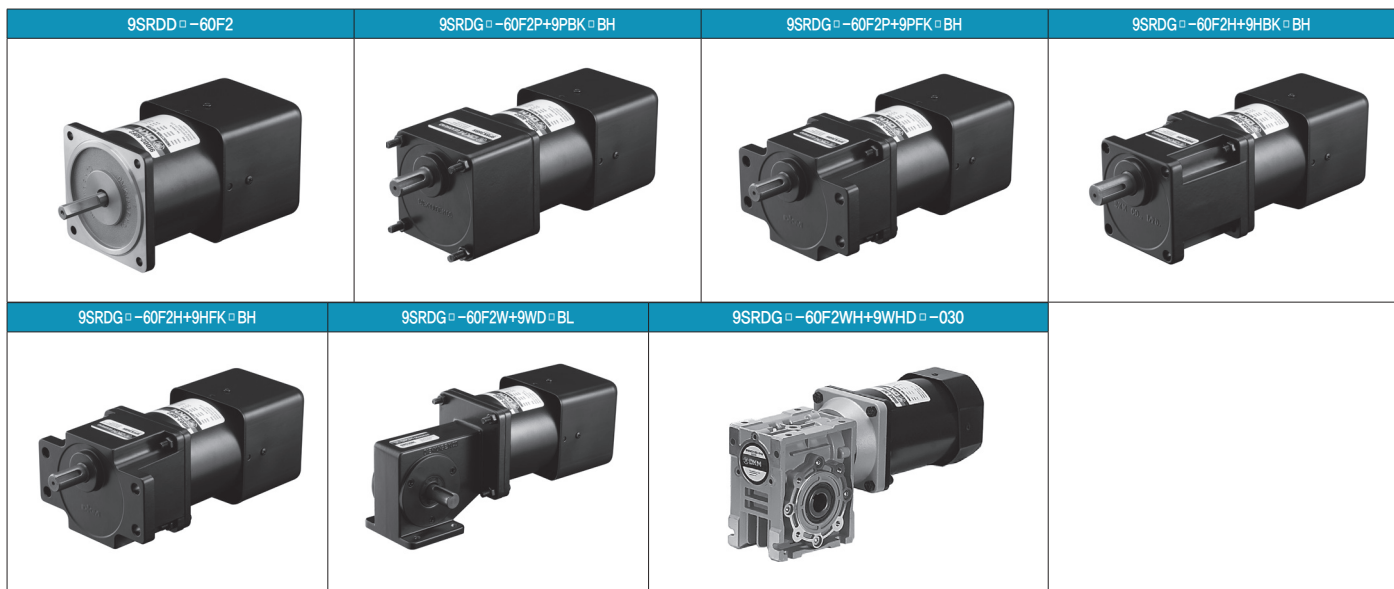


#### WEIGHT

PART	WEIGHT(Kg)
MOTOR	3.15
9PB(F)K2BH - 9PB(F)K10BH	1.28
9PB(F)K12.5BH - 9PB(F)K20BH	1.3
9PB(F)K25BH - 9PB(F)K60BH	1.45
9PB(F)K75BH - 9PB(F)K200BH	1.47
9HB(F)K3BH - 9HB(F)K10BH	1.62
9HB(F)K12.5BH - 9HB(F)K20BH	1.68
9HB(F)K25BH - 9HB(F)K60BH	1.73
9HB(F)K75BH - 9HB(F)K200BH	1.78
9WD□BL/BR/BRL	1.0
9WHD□-030	1.2
9XD10□□	0.6

\* The output flange and shaft are sold separately.

### Motor Images



## S.C. Reversible Motor 90W (□ 90mm)

# 90W

Speed Control  
Reversible Motor  
90W(□ 90mm)

### Motor Specification

Model 9SRDG*~90F2 □ : Gear Type Shaft 9SRDD*~90F2: D-Cut Type Shaft 9SRDK*~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	
Lead Wire Type													
9SRDG1(A)-90F2 □	90	1 ∅110	60	4	30min.	90-1700	6.00	0.600	7.30	0.730	3.00	0.300	25.0 / 250
9SRDG2(D)-90F2 □	90	1 ∅220	60	4	30min.	90-1700	6.00	0.600	7.30	0.730	3.00	0.300	6.5 / 450
9SRDGE-90F2 □	90	1 ∅220	50	4	30min.	90-1400	5.50	0.550	7.00	0.700	2.80	0.280	6.5 / 450
		1 ∅240					6.00	0.600	7.50	0.750	3.30	0.330	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	20
9SRDG*~90F2P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm	11.8	17.7	21.3	29.6	35.5	44.3	53.2	59.1	66.6	79.9	95.9	106.6
					N.m	1.16	1.74	2.09	2.90	3.48	4.35	5.22	5.79	6.53	7.83	9.40	10.44
			220	60	kgfcm	11.8	17.7	21.3	29.6	35.5	44.3	53.2	59.1	66.6	79.9	95.9	106.6
		220/240	50	N.m	1.16	1.74	2.09	2.90	3.48	4.35	5.22	5.79	6.53	7.83	9.40	10.44	
		90	110	60	kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8
					N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29
220	60		kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8		
220/240	50	N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29			
220/240	50	kgfcm	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9			
N.m	0.44	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01					

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	120.5	144.5	173.4	192.7	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
					N.m	11.80	14.16	17.00	18.89	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
			220	60	kgfcm	120.5	144.5	173.4	192.7	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
			220/240	50	N.m	11.80	14.16	17.00	18.89	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
			90	110	60	kgfcm	49.5	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	200.0	200.0	200.0	200.0
						N.m	4.85	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	19.60	19.60	19.60	19.60
		220		60	kgfcm	49.5	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	200.0	200.0	200.0	200.0	
		220/240		50	N.m	4.85	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	19.60	19.60	19.60	19.60	
		220/240	50	kgfcm	46.2	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0	200.0	200.0		
				N.m	4.53	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.



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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	
9SRDG*–90F2H	9HBK □ BH	1200	110	60	kgfcm	17.7	21.3	29.6	35.5	44.3	53.2	59.1	66.6	79.9	95.9	106.6	120.5	
					N.m	1.74	2.09	2.90	3.48	4.35	5.22	5.79	6.53	7.83	9.40	10.44	11.80	
			220	60	kgfcm	17.7	21.3	29.6	35.5	44.3	53.2	59.1	66.6	79.9	95.9	106.6	120.5	
			N.m	1.74	2.09	2.90	3.48	4.35	5.22	5.79	6.53	7.83	9.40	10.44	11.80			
		9HFK □ BH	90	220/240	50	kgfcm	17.0	20.4	28.4	34.0	42.5	51.0	56.7	63.9	76.7	92.0	102.2	115.5
					N.m	1.67	2.00	2.78	3.33	4.17	5.00	5.56	6.26	7.51	9.01	10.02	11.32	
110	60			kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5		
		N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85				
			220	60	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	
				N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85		
			220/240	50	kgfcm	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9	46.2	
				N.m	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53		

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200		
9SRDG*–90F2H	9HBK □ BH	1200	110	60	kgfcm	144.5	173.4	192.7	240.9	289.1	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	
					N.m	14.16	17.00	18.89	23.61	28.33	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
			220	60	kgfcm	144.5	173.4	192.7	240.9	289.1	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
			N.m	14.16	17.00	18.89	23.61	28.33	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	
		9HFK □ BH	90	220/240	50	kgfcm	138.6	166.3	184.8	231.0	277.2	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	13.58	16.30	18.11	22.64	27.17	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
110	60			kgfcm	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0			
		N.m	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40					
			220	60	kgfcm	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0		
				N.m	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40			
			220/240	50	kgfcm	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	247.8	297.4	300.0		
				N.m	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	24.28	29.14	29.40			

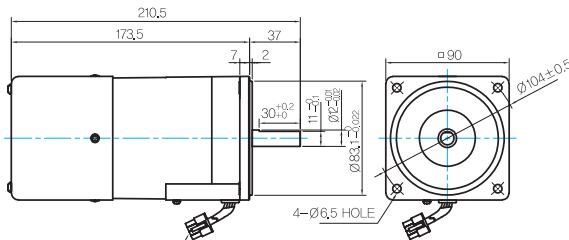
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60	
9SRDG*–90F2W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm	59.9	70.1	84.3	97.2	127.8	144.5	153.1	142.9	122.4	
					N.m	5.87	6.87	8.26	9.53	12.52	14.16	15.00	14.00	12.00	
			220	60	kgfcm	59.9	70.1	84.3	97.2	127.8	144.5	153.1	142.9	122.4	
				N.m	5.87	6.87	8.26	9.53	12.52	14.16	15.00	14.00	12.00		
				220/240	50	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	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			
	220	60	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				
		220/240	50	kgfcm	27.1	31.7	38.1	44.0	57.8	65.3	76.0	99.0	108.9		
				N.m	2.65	3.10	3.74	4.31	5.66	6.40	7.45	9.70	10.67		

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80	
9SRG*–90F2WH	9WHD □ –030	1200	110	60	kgfcm	25.4	36.8	47.3	66.6	84.1	96.4	112.1	137.8	157.7	163.3	132.7	
					N.m	2.49	3.61	4.64	6.52	8.24	9.44	10.99	13.51	15.45	16.00	13.00	
			220	60	kgfcm	25.4	36.8	47.3	66.6	84.1	96.4	112.1	137.8	157.7	163.3	132.7	
				N.m	2.49	3.61	4.64	6.52	8.24	9.44	10.99	13.51	15.45	16.00	13.00		
				220/240	50	kgfcm	26.1	37.8	48.6	68.4	86.4	99.0	115.2	141.6	162.0	163.3	132.7
						N.m	2.56	3.70	4.76	6.70	8.47	9.70	11.29	13.88	15.88	16.00	13.00
90	110	60	kgfcm	10.4	15.1	19.4	27.4	34.6	39.6	46.1	56.6	64.8	72.0	84.5			
			N.m	1.02	1.48	1.91	2.68	3.39	3.88	4.52	5.55	6.35	7.06	8.28			
	220	60	kgfcm	10.4	15.1	19.4	27.4	34.6	39.6	46.1	56.6	64.8	72.0	84.5			
		N.m	1.02	1.48	1.91	2.68	3.39	3.88	4.52	5.55	6.35	7.06	8.28				
		220/240	50	kgfcm	11.5	16.6	21.4	30.1	38.0	43.6	50.7	62.3	71.3	79.2	92.9		
				N.m	1.13	1.63	2.10	2.95	3.73	4.27	4.97	6.11	6.99	7.76	9.11		

## Dimensions

### MOTOR ONLY

- MOTOR MODEL:  
9SRDD□-90F2 (POWERFUL FAN)



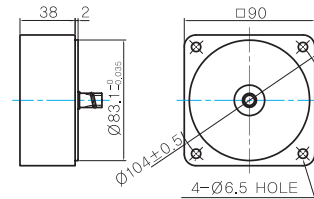
LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- MOTOR OUTPUT SHAFT
- KEY SPEC

MODEL	SPEC	MOTOR
D-CUT TYPE 9SRDD□-90F2		
KEY TYPE 9SRDK□-90F2		

### INTER-DECIMAL GEARBOX

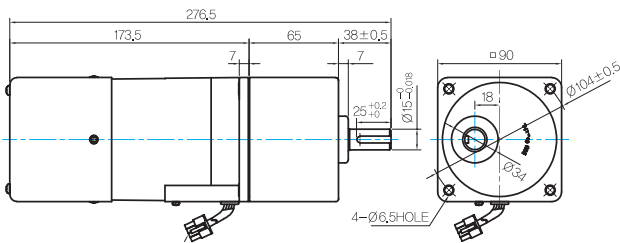
- MODEL: 9XD10□□



### GEARED MOTOR

#### P TYPE GEARBOX

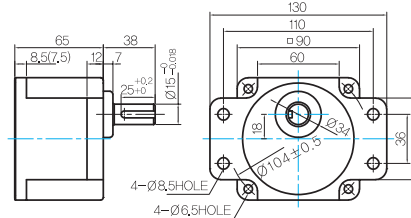
- MOTOR MODEL:  
9SRDG□-90F2P (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9PBK□BH

- GEARBOX MODEL:  
9PFK□BH



- GEARBOX OUTPUT SHAFT

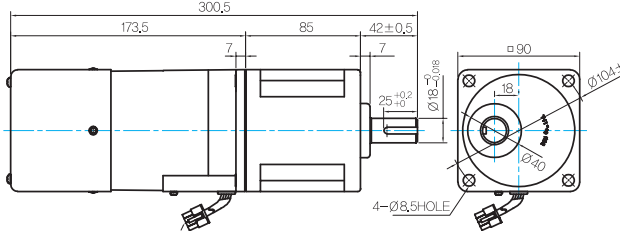
MODEL	SPEC
KEY TYPE 9PBK□BH 9PFK□BH	

- KEY SPEC

GEARBOX

#### H TYPE GEARBOX

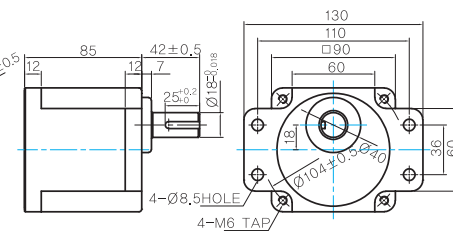
- MOTOR MODEL:  
9SRDG□-90F2H (POWERFUL FAN)



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9HBK□BH

- GEARBOX MODEL:  
9HFK□BH



- GEARBOX OUTPUT SHAFT

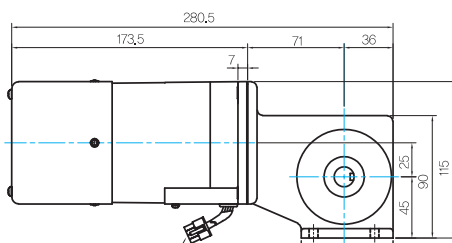
MODEL	SPEC
KEY TYPE 9HBK□BH 9HFK□BH	

- KEY SPEC

GEARBOX

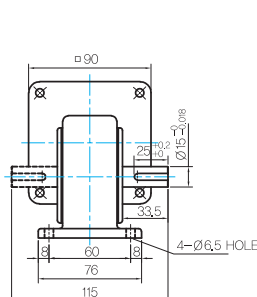
#### W TYPE GEARBOX

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



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9WD□BL/BR/BRL



- KEY SPEC

GEARBOX

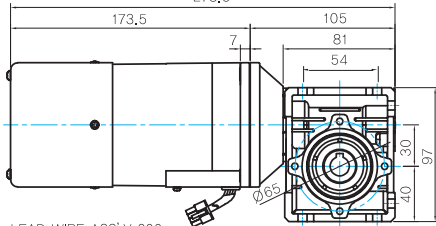
# B AC Motors

## S.C. Reversible Motor 90W (□ 90mm)

### Dimensions

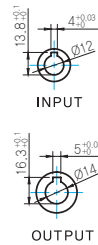
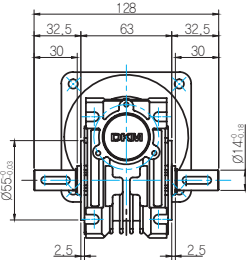
#### WH TYPE GEARBOX

● MOTOR MODEL:  
9SRDG□-90F2WH (POWERFUL FAN)  
278,5

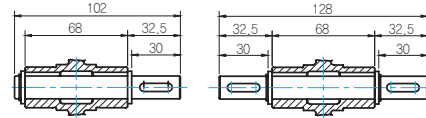


LEAD WIRE ASS'Y 300mm)  
MOTOR UL STYLE NO.3271 AWG NO.22  
T.G UL STYLE NO.1007 AWG No.22

● GEARBOX MODEL:  
9WHD□-030



● SHAFT



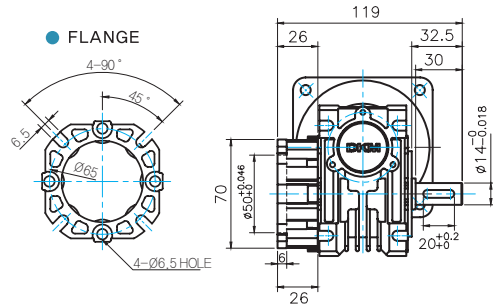
Unidirectional

Bi-directional

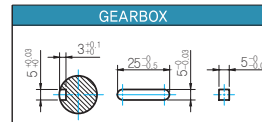
#### WEIGHT

PART		WEIGHT(Kg)
MOTOR		3,5
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12.5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9HB(F)K3BH - 9HB(F)K10BH	1,62
	9HB(F)K12.5BH - 9HB(F)K20BH	1,68
	9HB(F)K25BH - 9HB(F)K60BH	1,73
	9HB(F)K75BH - 9HB(F)K200BH	1,78
	9WD□BL/BR/BRL	1,0
	9WHD□-030	1,2
9XD10□□	0,6	

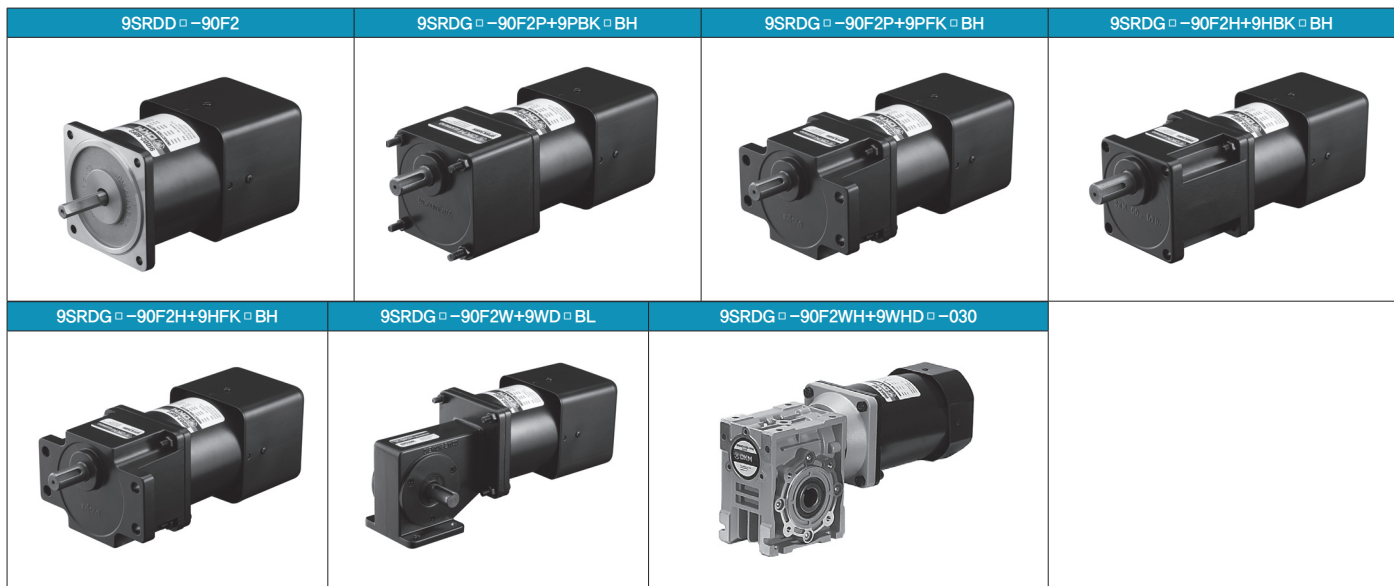
\* The output flange and shaft are sold separately



#### KEY SPEC



### Motor Images



# 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
									1200r/min		90r/min		
Lead Wire Type							kgfcm	N.m	kgfcm	N.m	kgfcm	N.m	
9SRDG1(A)-120F2□	120	1∅110	60	4	30min.	90-1700	7.80	0.780	8.20	0.820	3.60	0.360	30.0 / 250
9SRDG2(D)-120F2□	120	1∅220	60	4	30min.	90-1700	7.60	0.760	8.00	0.800	3.30	0.330	7.0 / 450
9SRDGE-120F2□	120	1∅220	50	4	30min.	90-1400	6.00	0.600	7.50	0.750	3.30	0.330	7.0 / 450
		1∅240					6.50	0.650	8.00	0.800	3.80	0.380	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	20	
9SRDG*-120F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm	13.3	19.9	23.9	33.2	39.9	49.8	59.8	66.4	74.8	89.8	107.7	119.7	
					N.m	1.30	1.95	2.34	3.25	3.91	4.88	5.86	6.51	7.33	8.80	10.56	11.73	
			220	60	kgfcm	13.0	19.4	23.3	32.4	38.9	48.6	58.3	64.8	73.0	87.6	105.1	116.8	
		N.m			1.27	1.91	2.29	3.18	3.81	4.76	5.72	6.35	7.15	8.58	10.30	11.45		
		90	60	110	60	kgfcm	5.8	8.7	10.5	14.6	17.5	21.9	26.2	29.2	32.9	39.4	47.3	52.6
						N.m	0.57	0.86	1.03	1.43	1.71	2.14	2.57	2.86	3.22	3.86	4.64	5.15
220	60			kgfcm	5.3	8.0	9.6	13.4	16.0	20.0	24.1	26.7	30.1	36.1	43.4	48.2		
		N.m	0.52	0.79	0.94	1.31	1.57	1.96	2.36	2.62	2.95	3.54	4.25	4.72				
220/240	50	220	60	kgfcm	5.3	8.0	9.6	13.4	16.0	20.0	24.1	26.7	30.1	36.1	43.4	48.2		
				N.m	0.52	0.79	0.94	1.31	1.57	1.96	2.36	2.62	2.95	3.54	4.25	4.72		

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200			
9SRDG*-120F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm	135.3	162.4	194.8	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0			
					N.m	13.26	15.91	19.09	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	60	kgfcm	132.0	158.4	190.1	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	12.94	15.52	18.63	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	220	60	kgfcm	123.8	148.5	178.2	198.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
							N.m	12.13	14.55	17.46	19.40	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		90	60	110	60	kgfcm	59.4	71.3	85.5	95.0	118.8	142.6	159.3	191.2	200.0	200.0	200.0	200.0	200.0	200.0	
						N.m	5.82	6.99	8.38	9.31	11.64	13.97	15.61	18.73	19.60	19.60	19.60	19.60	19.60	19.60	
				220	60	kgfcm	54.5	65.3	78.4	87.1	108.9	130.7	146.0	175.2	194.7	200.0	200.0	200.0	200.0	200.0	
						N.m	5.34	6.40	7.68	8.54	10.67	12.81	14.31	17.17	19.08	19.60	19.60	19.60	19.60	19.60	
				220/240	50	220	60	kgfcm	54.5	65.3	78.4	87.1	108.9	130.7	146.0	175.2	194.7	200.0	200.0	200.0	200.0
								N.m	5.34	6.40	7.68	8.54	10.67	12.81	14.31	17.17	19.08	19.60	19.60	19.60	19.60

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
9SRDG*~120F2H	9HBK □ BH	1200	110	60	kgfcm N.m	19.9 1.95	23.9 2.34	33.2 3.25	39.9 3.91	49.8 4.88	59.8 5.86	66.4 6.51	74.8 7.33	89.8 8.80	107.7 10.56	119.7 11.73	135.3 13.26
			220	60	kgfcm N.m	19.4 1.91	23.3 2.29	32.4 3.18	38.9 3.81	48.6 4.76	58.3 5.72	64.8 6.35	73.0 7.15	87.6 8.58	105.1 10.30	116.8 11.45	132.0 12.94
			220/240	50	kgfcm N.m	18.2 1.79	21.9 2.14	30.4 2.98	36.5 3.57	45.6 4.47	54.7 5.36	60.8 5.95	68.4 6.71	82.1 8.05	98.6 9.66	109.5 10.73	123.8 12.13
	9HFK □ BH	90	110	60	kgfcm N.m	8.7 0.86	10.5 1.03	14.6 1.43	17.5 1.71	21.9 2.14	26.2 2.57	29.2 2.86	32.9 3.22	39.4 3.86	47.3 4.64	52.6 5.15	59.4 5.82
			220	60	kgfcm N.m	8.0 0.79	9.6 0.94	13.4 1.31	16.0 1.57	20.0 1.96	24.1 2.36	26.7 2.62	30.1 2.95	36.1 3.54	43.4 4.25	48.2 4.72	54.5 5.34
			220/240	50	kgfcm N.m	8.0 0.79	9.6 0.94	13.4 1.31	16.0 1.57	20.0 1.96	24.1 2.36	26.7 2.62	30.1 2.95	36.1 3.54	43.4 4.25	48.2 4.72	54.5 5.34

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200		
9SRDG*~120F2H	9HBK □ BH	1200	110	60	kgfcm N.m	162.4 15.91	194.8 19.09	216.5 21.22	270.6 26.52	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	60	kgfcm N.m	158.4 15.52	190.1 18.63	211.2 20.70	264.0 25.87	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
			220/240	50	kgfcm N.m	148.5 14.55	178.2 17.46	198.0 19.40	247.5 24.26	297.0 29.11	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
	9HFK □ BH	90	110	60	kgfcm N.m	71.3 6.99	85.5 8.38	95.0 9.31	118.8 11.64	142.6 13.97	159.3 15.61	191.2 18.73	212.4 20.82	254.9 24.98	300.0 29.40	300.0 29.40	300.0 29.40	300.0 29.40	
			220	60	kgfcm N.m	65.3 6.40	78.4 7.68	87.1 8.54	108.9 10.67	130.7 12.81	146.0 14.31	175.2 17.17	194.7 19.08	233.6 22.90	292.1 28.62	300.0 29.40	300.0 29.40		
			220/240	50	kgfcm N.m	65.3 6.40	78.4 7.68	87.1 8.54	108.9 10.67	130.7 12.81	146.0 14.31	175.2 17.17	194.7 19.08	233.6 22.90	292.1 28.62	300.0 29.40	300.0 29.40		

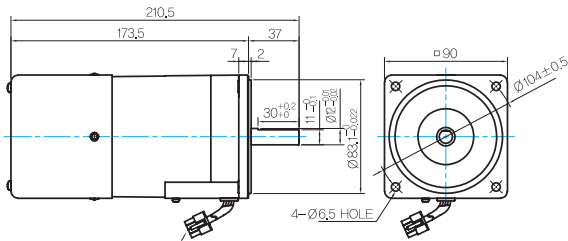
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SRDG*~120F2W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm N.m	67.2 6.59	78.7 7.71	94.7 9.28	109.2 10.70	143.5 14.06	162.4 15.91	153.1 15.00	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	65.6 6.43	76.8 7.53	92.4 9.06	106.6 10.44	140.0 13.72	158.4 15.52	153.1 15.00	142.9 14.00	122.4 12.00
			220/240	50	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
		90	110	60	kgfcm N.m	29.5 2.89	34.6 3.39	41.6 4.07	48.0 4.70	63.0 6.17	71.3 6.99	82.9 8.13	108.0 10.58	122.4 12.00
			220	60	kgfcm N.m	27.1 2.65	31.7 3.10	38.1 3.74	44.0 4.31	57.8 5.66	65.3 6.40	76.0 7.45	99.0 9.70	122.4 12.00
			220/240	50	kgfcm N.m	27.1 2.65	31.7 3.10	38.1 3.74	44.0 4.31	57.8 5.66	65.3 6.40	76.0 7.45	99.0 9.70	122.4 12.00

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SRDG*~120F2WH	9WHD □	1200	110	60	kgfcm N.m	28.5 2.80	41.3 4.05	53.1 5.21	74.8 7.33	94.5 9.26	108.2 10.61	126.0 12.34	154.8 15.17	173.5 17.00	163.3 16.00	132.7 13.00
			220	60	kgfcm N.m	27.8 2.73	40.3 3.95	51.8 5.08	73.0 7.15	92.2 9.03	105.6 10.35	122.9 12.04	151.0 14.80	173.5 17.00	163.3 16.00	132.7 13.00
			220/240	50	kgfcm N.m	27.8 2.73	40.3 3.95	51.8 5.08	73.0 7.15	92.2 9.03	105.6 10.35	122.9 12.04	151.0 14.80	173.5 17.00	163.3 16.00	132.7 13.00
		90	110	60	kgfcm N.m	12.5 1.23	18.1 1.78	23.3 2.29	32.8 3.22	41.5 4.06	47.5 4.66	55.3 5.42	68.0 6.66	77.8 7.62	86.4 8.47	101.4 9.93
			220	60	kgfcm N.m	11.5 1.13	16.6 1.63	21.4 2.10	30.1 2.95	38.0 3.73	43.6 4.27	50.7 4.97	62.3 6.11	71.3 6.99	79.2 7.76	92.9 9.11
			220/240	50	kgfcm N.m	13.2 1.30	19.2 1.88	24.6 2.41	34.7 3.40	43.8 4.29	50.2 4.92	58.4 5.72	71.7 7.03	82.1 8.04	91.2 8.94	107.0 10.49

## Dimensions

### MOTOR ONLY

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

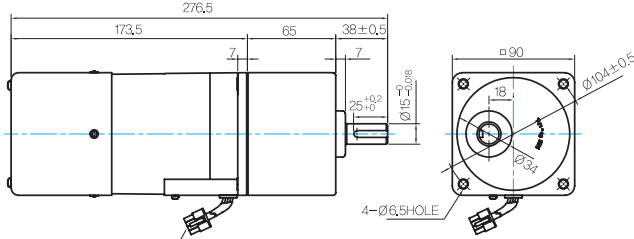


LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG No,20  
T,G UL STYLE NO.1007 AWG No,22

### GEARED MOTOR

#### P TYPE GEARBOX

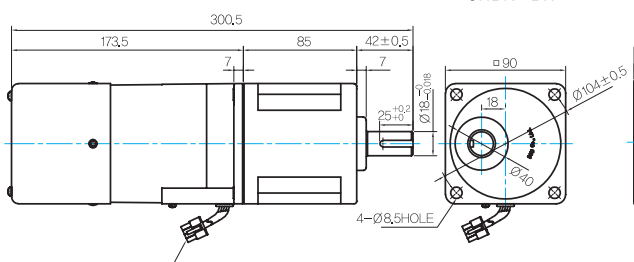
- MOTOR MODEL:  
9SRDG□-120F2P (POWERFUL FAN)



LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG No,20  
T,G UL STYLE NO.1007 AWG No,22

#### H TYPE GEARBOX

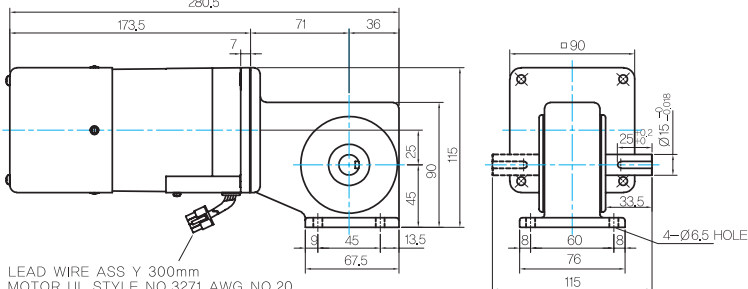
- MOTOR MODEL:  
9SRDG□-120F2H (POWERFUL FAN)



LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG No,20  
T,G UL STYLE NO.1007 AWG No,22

#### W TYPE GEARBOX

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

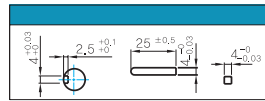


LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG No,20  
T,G UL STYLE NO.1007 AWG No,22

### MOTOR OUTPUT SHAFT

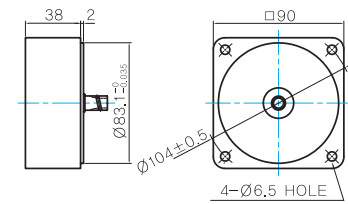
MODEL	SPEC
D-CUT TYPE	37 30 <sup>+0.02</sup> <sub>-0</sub> 11 <sup>+0.02</sup> Ø12 <sup>+0.02</sup>
9SRDD□-120F2	
KEY TYPE	37 25 <sup>+0.02</sup> 14 <sup>+0.02</sup> Ø12 <sup>+0.02</sup>
9SRDK□-120F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□



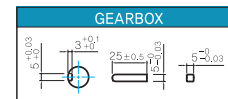
Ø104±0.5

4-Ø6.5 HOLE

### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	38 25 <sup>+0.02</sup> 11 <sup>+0.02</sup> Ø15 <sup>+0.02</sup>
9PBK□BH 9PFK□BH	

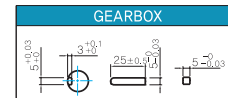
### KEY SPEC



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	42 25 <sup>+0.02</sup> 11 <sup>+0.02</sup> Ø15 <sup>+0.02</sup>
9HBK□BH 9HFK□BH	

### KEY SPEC



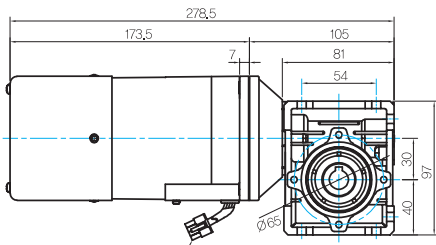
# B AC Motors

## S.C. Reversible Motor 120W (□90mm)

### Dimensions

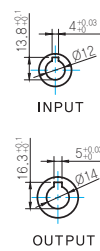
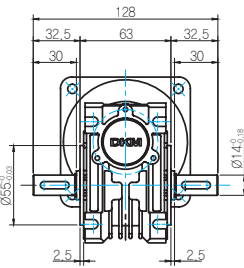
#### WH TYPE GEARBOX

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

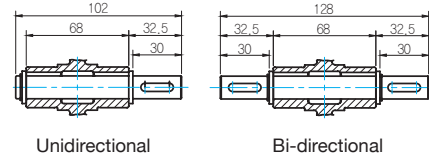


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T.G. UL STYLE NO.1007 AWG No.22

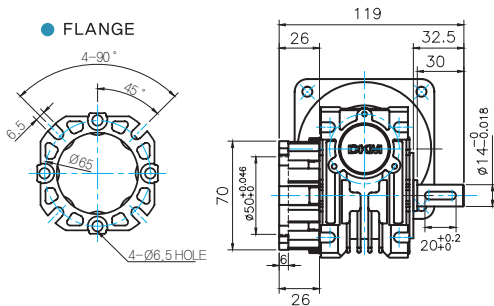
● GEARBOX MODEL:  
9WHD□-030



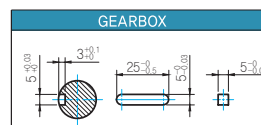
● SHAFT



● FLANGE



● KEY SPEC

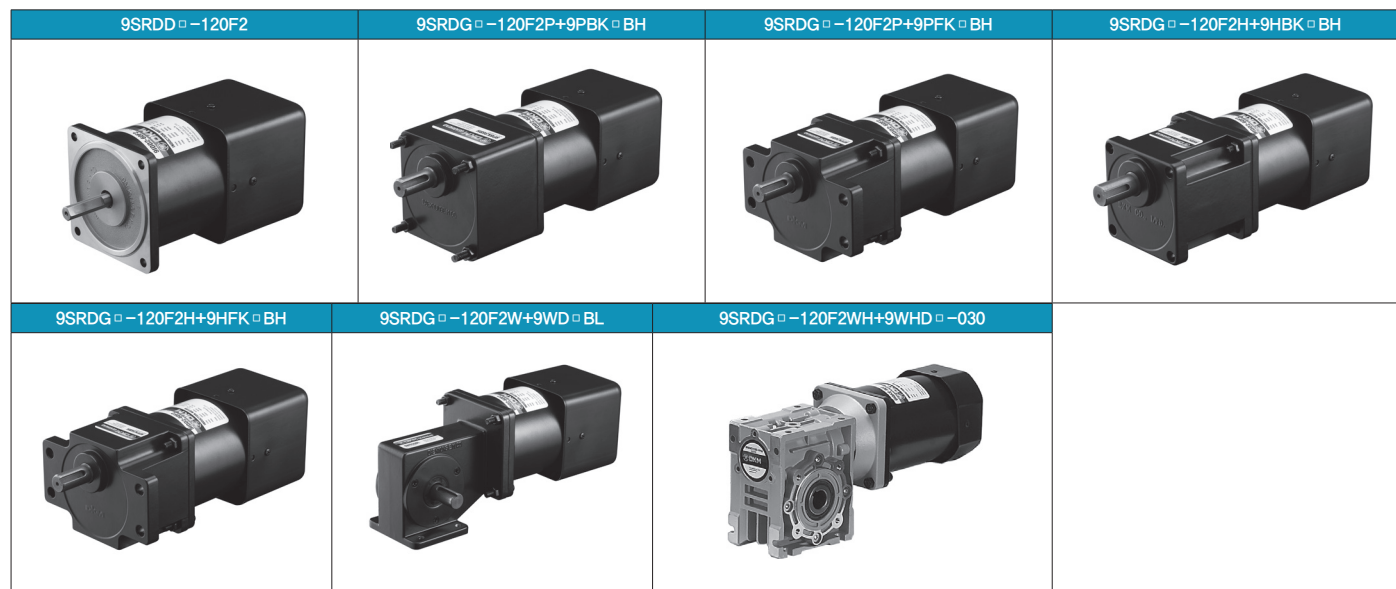


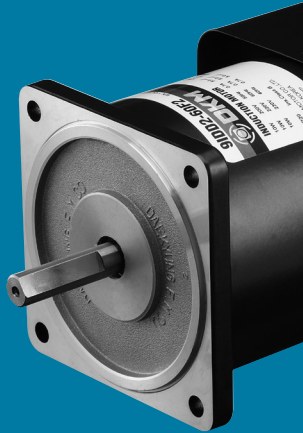
#### WEIGHT

PART		WEIGHT(Kg)
MOTOR		3.5
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9HB(F)K3BH - 9HB(F)K10BH	1.62
	9HB(F)K12.5BH - 9HB(F)K20BH	1.68
	9HB(F)K25BH - 9HB(F)K60BH	1.73
	9HB(F)K75BH - 9HB(F)K200BH	1.78
	9WD□BL/BR/BRL	1.0
	9WHD□-030	1.2
9XD10□□	0.6	

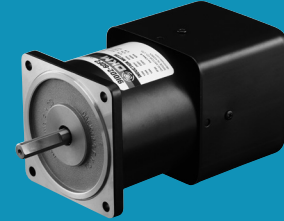
\* The output flange and shaft are sold separately

### Motor Images





# Speed Control Brake Motor



S.C. Brake Motor

## Index

Speed Control Brake Motor 6W (□ 60mm)	B-289
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Speed Control Brake Motor 15W (□ 80mm)	B-297
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Speed Control Brake Motor 180W (□ 90mm)	B-318





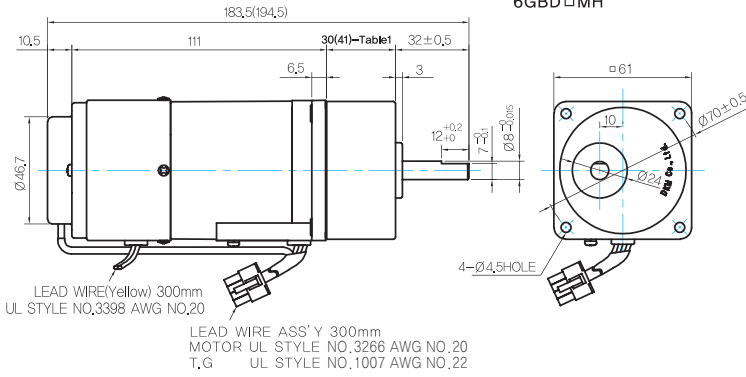
## GEARED MOTOR

### G TYPE GEARBOX

MOTOR MODEL: 6SBDG□-6G (NO FAN)

GEARBOX MODEL: 6GBD□MH

GEARBOX OUTPUT SHAFT



MODEL	SPEC
D-CUT TYPE	

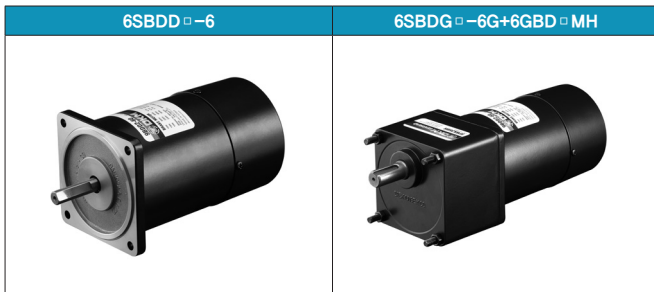
30(41)-Table1

SIZE(mm)	GEAR RATIO
30	6GBD3MH ~ 6GBD18MH
41	6GBD25MH ~ 6GBD360MH

WEIGHT

PART	WEIGHT(Kg)	
MOTOR	0,7	
GEAR BOX	6GBD3MH ~ 6GBD18MH	0,3
	6GBD20MH ~ 6GBD40MH	0,32
	6GBD50MH ~ 6GBD250MH	0,34

### Motor Images



# B AC Motors

S.C. Brake Motor 6W (□ 70mm)

## 6W Speed Control Brake Motor 6W(□ 70mm)

### Motor Specification

Model 7SBDG*-6G: Gear Type Shaft 7SBD*-6: D-Cut 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	
7SBDG1(A)-6G	6	1φ 110	60	4	30min.	90-1700	0.37	0.037	0.54	0.054	0.36	0.036	3.0 / 250
7SBDG2(D)-6G	6	1φ 220	60	4	30min.	90-1700	0.41	0.041	0.56	0.056	0.39	0.039	1.0 / 450
7SBDGE-6G	6	1φ 220	50	4	30min.	90-1400	0.32	0.032	0.47	0.047	0.31	0.031	1.0 / 450
		1φ 240					0.36	0.036	0.52	0.052	0.33	0.033	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	10	12.5	15	18	20	25
7SBDG*-6G	7GBK □ BMH	1200	110	60	kgfcm N.m	1.3 0.13	1.6 0.15	2.2 0.21	2.6 0.26	3.3 0.32	3.9 0.39	4.4 0.43	5.5 0.54	6.6 0.64	7.9 0.77	7.9 0.77	9.9 0.97
			220	60	kgfcm N.m	1.4 0.13	1.6 0.16	2.3 0.22	2.7 0.27	3.4 0.33	4.1 0.40	4.5 0.44	5.7 0.56	6.8 0.67	8.2 0.80	8.2 0.80	10.2 1.00
			220/240	50	kgfcm N.m	1.1 0.11	1.4 0.13	1.9 0.19	2.3 0.22	2.9 0.28	3.4 0.34	3.8 0.37	4.8 0.47	5.7 0.56	6.9 0.67	6.9 0.67	8.6 0.84
		90	110	60	kgfcm N.m	0.9 0.09	1.0 0.10	1.5 0.14	1.7 0.17	2.2 0.21	2.6 0.26	2.9 0.29	3.6 0.36	4.4 0.43	5.2 0.51	5.3 0.52	6.6 0.64
			220	60	kgfcm N.m	0.9 0.09	1.1 0.11	1.6 0.15	1.9 0.19	2.4 0.23	2.8 0.28	3.2 0.31	3.9 0.39	4.7 0.46	5.7 0.56	5.7 0.56	7.1 0.70
			220/240	50	kgfcm N.m	0.8 0.07	0.9 0.09	1.3 0.12	1.5 0.15	1.9 0.18	2.3 0.22	2.5 0.25	3.1 0.31	3.8 0.37	4.5 0.44	4.5 0.44	5.7 0.55

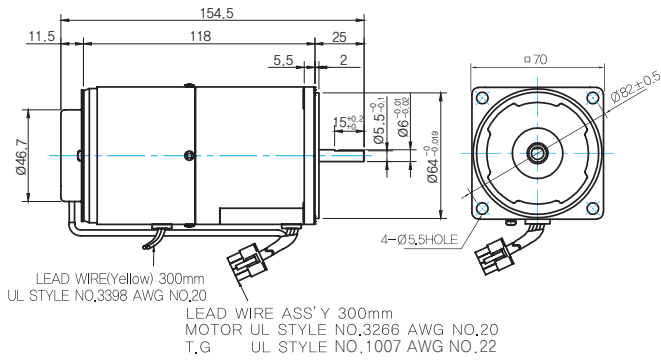
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200
7SBDG*-6G	7GBK □ BMH	1200	110	60	kgfcm N.m	11.8 1.16	14.2 1.39	15.8 1.55	17.8 1.75	21.4 2.10	26.7 2.62	32.1 3.14	35.6 3.49	42.8 4.19	50.0 4.90	50.0 4.90	50.0 4.90
			220	60	kgfcm N.m	12.3 1.20	14.7 1.44	16.4 1.60	18.5 1.81	22.2 2.17	27.7 2.72	33.3 3.26	37.0 3.62	44.4 4.35	50.0 4.90	50.0 4.90	50.0 4.90
			220/240	50	kgfcm N.m	10.3 1.01	12.4 1.21	13.7 1.34	15.5 1.52	18.6 1.82	23.3 2.28	27.9 2.74	31.0 3.04	37.2 3.65	46.5 4.56	50.0 4.90	50.0 4.90
		90	110	60	kgfcm N.m	7.9 0.77	9.5 0.93	10.5 1.03	11.9 1.16	14.3 1.40	17.8 1.75	21.4 2.10	23.8 2.33	28.5 2.79	35.6 3.49	42.8 4.19	47.5 4.66
			220	60	kgfcm N.m	8.5 0.84	10.2 1.00	11.4 1.12	12.9 1.26	15.4 1.51	19.3 1.89	23.2 2.27	25.7 2.52	30.9 3.03	38.6 3.78	46.3 4.54	51.5 5.05
			220/240	50	kgfcm N.m	6.8 0.67	8.1 0.80	9.1 0.89	10.2 1.00	12.3 1.20	15.3 1.50	18.4 1.80	20.5 2.01	24.6 2.41	30.7 3.01	36.8 3.61	40.9 4.01

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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: 7SBDD□-6 (NO FAN)



### MOTOR OUTPUT SHAFT

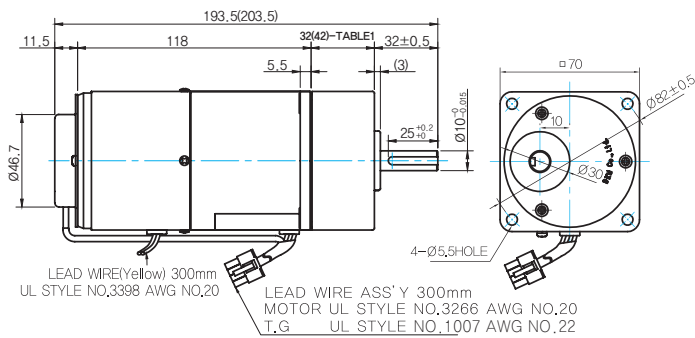
MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

### G TYPE GEARBOX

- MOTOR MODEL: 7SBDG□-6G (NO FAN)

- GEARBOX MODEL: 7GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC

GEARBOX	

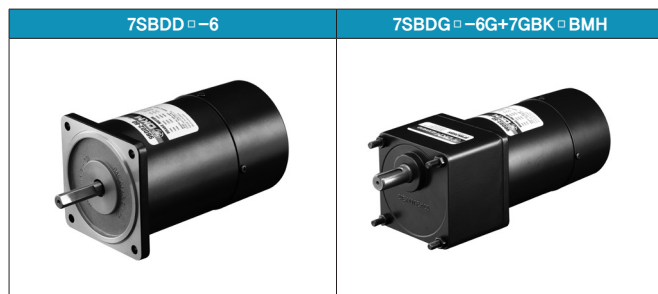
### 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

### WEIGHT

PART		WEIGHT(Kg)
MOTOR		1,30
GEAR BOX	7GBK3BMH - 7GBK18BMH	0,38
	7GBK20BMH - 7GBK40BMH	0,48
	7GBK50BMH - 7GBK200BMH	0,53

## Motor Images



# B AC Motors

S.C. Brake Motor 10W (□ 70mm)

## 10W Speed Control Brake Motor 10W(□ 70mm)

### Motor Specification

Model 7SBDG*-10G: Gear Type Shaft 7SBDD*-10: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
7SBDG1(A)-10G	10	1ϕ110	60	4	30min.	90-1700	0.60	0.060	0.75	0.075	0.42	0.042	3.5 / 250
7SBDG2(D)-10G	10	1ϕ220	60	4	30min.	90-1700	0.60	0.060	0.75	0.075	0.42	0.042	1.2 / 450
7SBDGE-10G	10	1ϕ220	50	4	30min.	90-1400	0.58	0.058	0.74	0.074	0.41	0.041	1.2 / 450
		0.62					0.062	0.76	0.076	0.42	0.042		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
7SBDG*-10G	7GBK □ BMH	1200	110	60	kgfcm	1.8	2.2	3.0	3.6	4.6	5.5	6.1	7.6	9.1	10.9	11.0	13.7
					N.m	0.18	0.21	0.30	0.36	0.45	0.54	0.60	0.74	0.89	1.07	1.07	1.34
			220	60	kgfcm	1.8	2.2	3.0	3.6	4.6	5.5	6.1	7.6	9.1	10.9	11.0	13.7
					N.m	0.18	0.21	0.30	0.36	0.45	0.54	0.60	0.74	0.89	1.07	1.07	1.34
			220/240	50	kgfcm	1.8	2.2	3.0	3.6	4.5	5.4	6.0	7.5	9.0	10.8	10.8	13.5
					N.m	0.18	0.21	0.29	0.35	0.44	0.53	0.59	0.73	0.88	1.06	1.06	1.32
		90	110	60	kgfcm	1.0	1.2	1.7	2.0	2.6	3.1	3.4	4.3	5.1	6.1	6.1	7.7
					N.m	0.10	0.12	0.17	0.20	0.25	0.30	0.33	0.42	0.50	0.60	0.60	0.75
			220	60	kgfcm	1.0	1.2	1.7	2.0	2.6	3.1	3.4	4.3	5.1	6.1	6.1	7.7
					N.m	0.10	0.12	0.17	0.20	0.25	0.30	0.33	0.42	0.50	0.60	0.60	0.75
			220/240	50	kgfcm	1.0	1.2	1.7	2.0	2.5	3.0	3.3	4.2	5.0	6.0	6.0	7.5
					N.m	0.10	0.12	0.16	0.20	0.24	0.29	0.33	0.41	0.49	0.59	0.59	0.73

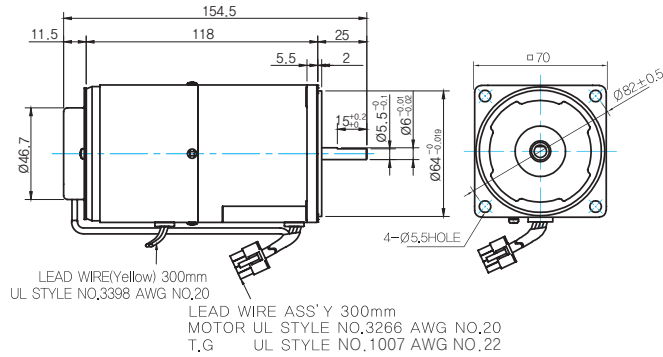
Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200
7SBDG*-10G	7GBK □ BMH	1200	110	60	kgfcm	16.4	19.7	21.9	24.8	29.7	37.1	44.6	49.5	50.0	50.0	50.0	50.0
					N.m	1.61	1.93	2.15	2.43	2.91	3.64	4.37	4.85	4.90	4.90	4.90	4.90
			220	60	kgfcm	16.4	19.7	21.9	24.8	29.7	37.1	44.6	49.5	50.0	50.0	50.0	50.0
					N.m	1.61	1.93	2.15	2.43	2.91	3.64	4.37	4.85	4.90	4.90	4.90	4.90
			220/240	50	kgfcm	16.2	19.4	21.6	24.4	29.3	36.6	44.0	48.8	50.0	50.0	50.0	50.0
					N.m	1.59	1.91	2.12	2.39	2.87	3.59	4.31	4.79	4.90	4.90	4.90	4.90
		90	110	60	kgfcm	9.2	11.0	12.3	13.9	16.6	20.8	24.9	27.7	33.3	41.6	49.9	50.0
					N.m	0.90	1.08	1.20	1.36	1.63	2.04	2.44	2.72	3.26	4.07	4.89	4.90
			220	60	kgfcm	9.2	11.0	12.3	13.9	16.6	20.8	24.9	27.7	33.3	41.6	49.9	50.0
					N.m	0.90	1.08	1.20	1.36	1.63	2.04	2.44	2.72	3.26	4.07	4.89	4.90
			220/240	50	kgfcm	9.0	10.8	12.0	13.5	16.2	20.3	24.4	27.1	32.5	40.6	48.7	50.0
					N.m	0.88	1.06	1.17	1.33	1.59	1.99	2.39	2.65	3.18	3.98	4.77	4.90

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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: 7SBDD□-10 (NO FAN)



- MOTOR OUTPUT SHAFT

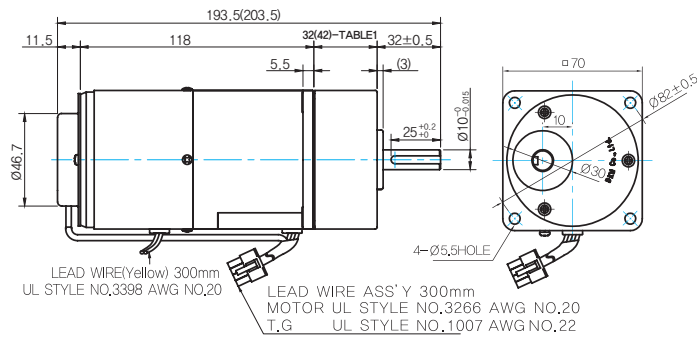
MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL: 7SBDG□-10G (NO FAN)

- GEARBOX MODEL: 7GBK□BMH



- GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

- KEY SPEC

GEARBOX

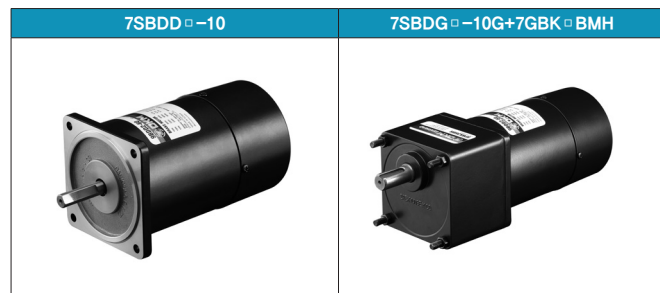
- 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

- WEIGHT

	PART	WEIGHT(Kg)
GEAR BOX	MOTOR	1.30
	7GBK3BMH - 7GBK18BMH	0.38
	7GBK20BMH - 7GBK40BMH	0.48
	7GBK50BMH - 7GBK200BMH	0.53

## Motor Images



# B AC Motors

S.C. Brake Motor 15W (□ 70mm)

## 15W Speed Control Brake Motor 15W(□ 70mm)

### Motor Specification

Model 7SBDG*–15G: Gear Type Shaft 7SBDD*–15: D–Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
7SBDG1(A)–15G	15	1∅110	60	4	30min.	90–1700	1.00	0.100	1.35	0.135	0.55	0.055	6.0 / 250
7SBDG2(D)–15G	15	1∅220	60	4	30min.	90–1700	1.00	0.100	1.35	0.135	0.55	0.055	1.5 / 450
7SBDGE–15G	15	1∅220	50	4	30min.	90–1400	0.80	0.080	1.00	0.100	0.53	0.053	1.5 / 450
		1∅240					1.00	0.100	1.20	0.120	0.57	0.057	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D–Cut Type Shaft is for using the motor only.

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

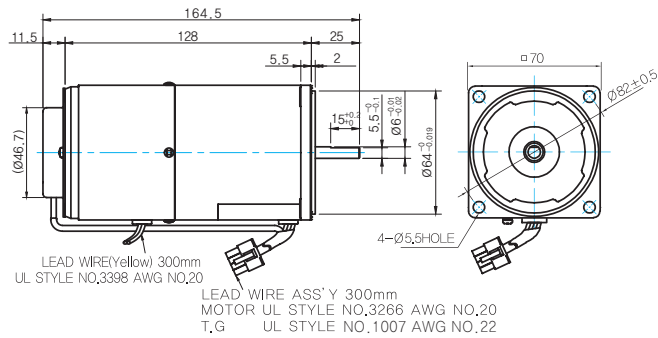
Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
7SBDG*–15G	7GBK □ BMH	1200	110	60	kgfcm	3.3	3.9	5.5	6.6	8.2	9.8	10.9	13.7	16.4	19.7	19.7	24.6	29.6	35.5	39.4	44.6	53.5	66.8	50.0	50.0	50.0	50.0	50.0	50.0	50.0		
					N.m	0.32	0.39	0.54	0.64	0.80	0.96	1.07	1.34	1.61	1.93	1.93	2.41	2.90	3.48	3.86	4.37	5.24	6.55	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90
			220	60	kgfcm	3.3	3.9	5.5	6.6	8.2	9.8	10.9	13.7	16.4	19.7	19.7	24.6	29.6	35.5	39.4	44.6	53.5	66.8	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
					N.m	0.32	0.39	0.54	0.64	0.80	0.96	1.07	1.34	1.61	1.93	1.93	2.41	2.90	3.48	3.86	4.37	5.24	6.55	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90
			220/240	50	kgfcm	2.4	2.9	4.1	4.9	6.1	7.3	8.1	10.1	12.2	14.6	14.6	18.3	21.9	26.3	29.2	33.0	39.6	49.5	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
					N.m	0.24	0.29	0.40	0.48	0.60	0.71	0.79	0.99	1.19	1.43	1.43	1.79	2.15	2.58	2.86	3.23	3.88	4.85	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90
		90	110	60	kgfcm	1.3	1.6	2.2	2.7	3.3	4.0	4.5	5.6	6.7	8.0	8.0	10.0	12.0	14.5	16.1	18.2	21.8	27.2	32.7	36.3	43.6	50.0	50.0	50.0	50.0	50.0	
					N.m	0.13	0.16	0.22	0.26	0.33	0.39	0.44	0.55	0.65	0.79	0.79	0.98	1.18	1.42	1.57	1.78	2.13	2.67	3.20	3.56	4.27	4.90	4.90	4.90	4.90	4.90	
			220	60	kgfcm	1.3	1.6	2.2	2.7	3.3	4.0	4.5	5.6	6.7	8.0	8.0	10.0	12.0	14.5	16.1	18.2	21.8	27.2	32.7	36.3	43.6	50.0	50.0	50.0	50.0	50.0	
					N.m	0.13	0.16	0.22	0.26	0.33	0.39	0.44	0.55	0.65	0.79	0.79	0.98	1.18	1.42	1.57	1.78	2.13	2.67	3.20	3.56	4.27	4.90	4.90	4.90	4.90		
			220/240	50	kgfcm	1.3	1.5	2.1	2.6	3.2	3.9	4.3	5.4	6.4	7.7	7.7	9.7	11.6	13.9	15.5	17.5	21.0	26.2	31.5	35.0	42.0	50.0	50.0	50.0	50.0	50.0	
					N.m	0.13	0.15	0.21	0.25	0.32	0.38	0.42	0.53	0.63	0.76	0.76	0.95	1.14	1.36	1.52	1.71	2.06	2.57	3.09	3.43	4.11	4.90	4.90	4.90	4.90		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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: 7SBDD□-15 (NO FAN)



- MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	

### GEARED MOTOR

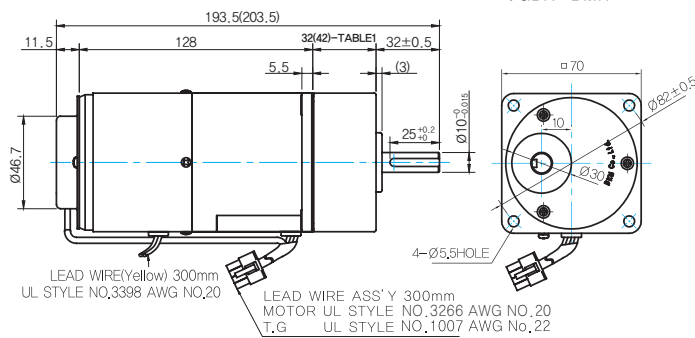
#### G TYPE GEARBOX

- MOTOR MODEL: 7SBDG□-15G (NO FAN)

- GEARBOX MODEL: 7GBK□BMH

- GEARBOX OUTPUT SHAFT

- KEY SPEC



MODEL	SPEC
KEY TYPE	

GEARBOX

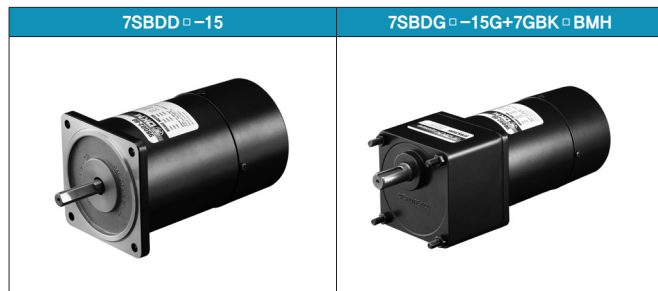
- 32(42)-Table1

SIZE(mm)	GEAR RATIO
32	7GBK3BMH - 7GBK18BMH
42	7GBK20BMH - 7GBK200BMH

- WEIGHT

	PART	WEIGHT(Kg)
	MOTOR	1,30
GEAR BOX	7GBK3BMH - 7GBK18BMH	0,38
	7GBK20BMH - 7GBK40BMH	0,48
	7GBK50BMH - 7GBK200BMH	0,53

## Motor Images





# B AC Motors

S.C. Brake Motor 15W (□ 80mm)

## 15W Speed Control Brake Motor 15W(□ 80mm)

### Motor Specification

Model 8SBDG*-15□ : Gear Type Shaft 8SBD*-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	
8SBDG1(A)-15□	15	1φ110	60	4	30min.	90-1700	0.85	0.085	1.40	0.140	0.50	0.050	6.0 / 250
8SBDG2(D)-15□	15	1φ220	60	4	30min.	90-1700	0.85	0.085	1.40	0.140	0.50	0.050	1.5 / 450
8SBDGE-15□	15	1φ220	50	4	30min.	90-1400	0.75	0.075	1.30	0.130	0.48	0.048	1.5 / 450
		1φ240					0.85	0.085	1.40	0.140	0.52	0.052	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200	250	300	360			
8SBDG*-15G	8GBK □ BMH	1200	110	60	kgfcm	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0		
					N.m	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61	4.01	4.53	5.43	6.79	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	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.3	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	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61	4.01	4.53	5.43	6.79	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	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	36.8	40.9	46.2	55.4	69.3	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	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00	3.61	4.01	4.53	5.43	6.79	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	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	11.0	13.1	14.6	16.5	19.8	24.8	29.7	33.0	39.6	49.5	59.4	66.0	80.0	80.0	80.0	80.0			
				N.m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.72	0.89	1.07	1.29	1.43	1.62	1.94	2.43	2.91	3.23	3.88	4.85	5.82	6.47	7.84	7.84	7.84	7.84			
				kgfcm	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	11.0	13.1	14.6	16.5	19.8	24.8	29.7	33.0	39.6	49.5	59.4	66.0	80.0	80.0	80.0	80.0	80.0		
		N.m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.72	0.89	1.07	1.29	1.43	1.62	1.94	2.43	2.91	3.23	3.88	4.85	5.82	6.47	7.84	7.84	7.84	7.84	7.84				
		kgfcm	1.3	1.5	2.1	2.5	3.2	3.8	4.2	5.3	6.3	7.6	7.6	9.5	11.4	13.7	15.2	17.2	20.6	25.7	30.9	34.3	41.2	51.5	61.8	68.6	80.0	80.0	80.0	80.0	80.0				
		N.m	0.12	0.15	0.21	0.25	0.31	0.37	0.41	0.52	0.62	0.74	0.74	0.93	1.12	1.34	1.49	1.68	2.02	2.52	3.03	3.36	4.04	5.05	6.05	6.73	7.84	7.84	7.84	7.84	7.84				

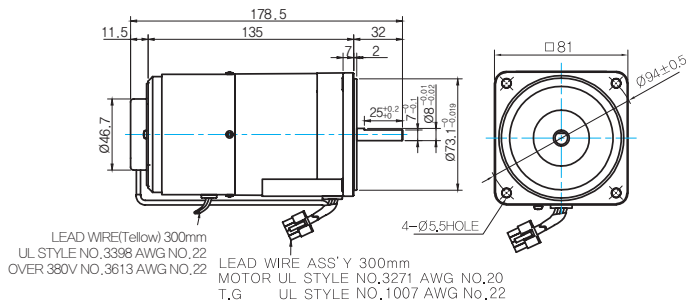
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
8SBDG*-15W	8WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm	11.5	13.4	16.2	18.6	24.5	27.7	32.3	42.0	46.2
					N.m	1.13	1.32	1.58	1.83	2.40	2.72	3.16	4.12	4.53
					kgfcm	11.6	13.9	17.4	20.9	29.1	34.9	41.8	58.1	69.7
		N.m	1.14	1.37	1.71	2.05	2.85	3.42	4.10	5.69	6.83			
		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	4.1	4.8	5.8	6.7	8.8	9.9	11.5	15.0	16.5		
			N.m	0.40	0.47	0.57	0.65	0.86	0.97	1.13	1.47	1.62		
			kgfcm	4.1	4.8	5.8	6.7	8.8	9.9	11.5	15.0	16.5		
N.m	0.40	0.47	0.57	0.65	0.86	0.97	1.13	1.47	1.62					
kgfcm	4.3	5.0	6.0	6.9	9.1	10.3	12.0	15.6	17.2					
N.m	0.42	0.49	0.59	0.68	0.89	1.01	1.17	1.53	1.68					

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft: a white background indicates the 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.

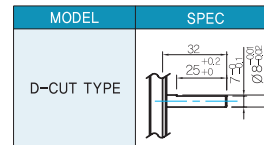
## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 8SBDD□-15 (NO FAN)

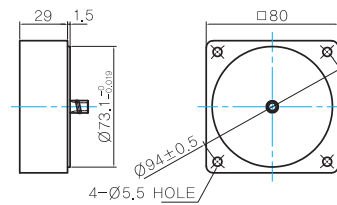


- MOTOR OUTPUT SHAFT



### INTER-DECIMAL GEARBOX

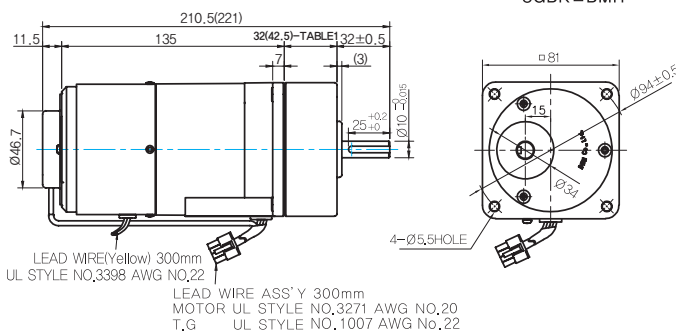
- MODEL: 8XD10□□



### GEARED MOTOR

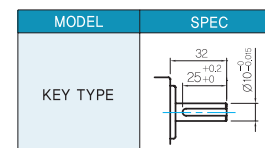
#### G TYPE GEARBOX

- MOTOR MODEL: 8SBDG□-15G (NO FAN)

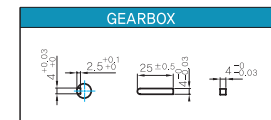


- GEARBOX MODEL: 8GBK□BMH

- GEARBOX OUTPUT SHAFT



- KEY SPEC

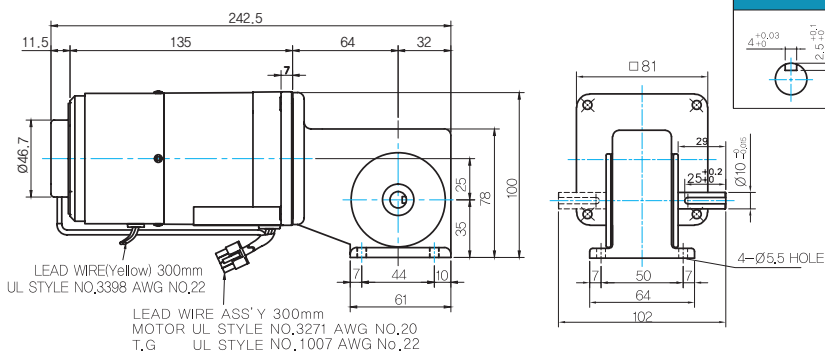


- 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

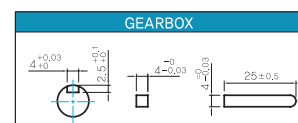
#### W TYPE GEARBOX

- MOTOR MODEL: 8SBDG□-15W (NO FAN)



- GEARBOX MODEL: 8WD□BL/BR/BRL

- KEY SPEC



#### WEIGHT

	PART	WEIGHT(Kg)
GEAR BOX	MOTOR	2.1
	8GBK3BMH ~ 8GBK18BMH	0.56
	8GBK20BMH ~ 8GBK40BMH	0.65
	8GBK50BMH ~ 8GBK360BMH	0.72
	8WD□BL/BR/BRL	0.68
	8XD10□□	0.45

# B AC Motors

S.C. Brake Motor 15W (□ 80mm)

## Motor Images



## S.C. Brake Motor 25W (□ 80mm)

# 25W

Speed Control  
Brake Motor  
25W(□ 80mm)

### Motor Specification

Model 8SBDG*-25 □ : Gear Type Shaft 8SBDD*-25: D-Cut 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
8SBDG1(A)-25 □	25	1 ∅110	60	4	30min.	90-1700	1.80	0.180	2.30	0.230	0.60	0.060	10.0 / 250
8SBDG2(D)-25 □	25	1 ∅220	60	4	30min.	90-1700	1.80	0.180	2.30	0.230	0.60	0.060	2.5 / 450
8SBDGE-25 □	25	1 ∅220	50	4	30min.	90-1400	1.60	0.160	2.10	0.210	0.55	0.055	2.5 / 450
		1.80					0.180	2.30	0.230	0.65	0.065		

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) The phase & voltage code A, D, E contain a built-in thermal protector.

3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	10	12.5	15	18	20	25	30	36
8SBDG*-25G	8GBK □ BMH	1200	110	60	kgfcm N.m	5.6 0.55	6.7 0.66	9.3 0.91	11.2 1.10	14.0 1.37	16.8 1.64	18.6 1.83	23.3 2.28	27.9 2.74	33.5 3.29	33.6 3.29	42.0 4.11	50.4 4.94	60.4 5.92
			220	60	kgfcm N.m	5.6 0.55	6.7 0.66	9.3 0.91	11.2 1.10	14.0 1.37	16.8 1.64	18.6 1.83	23.3 2.28	27.9 2.74	33.5 3.29	33.6 3.29	42.0 4.11	50.4 4.94	60.4 5.92
			220/ 240	50	kgfcm N.m	5.6 0.55	6.7 0.66	9.3 0.91	11.2 1.10	14.0 1.37	16.8 1.64	18.6 1.83	23.3 2.28	27.9 2.74	33.5 3.29	33.6 3.29	42.0 4.11	50.4 4.94	60.4 5.92
		90	110	60	kgfcm N.m	1.5 0.14	1.7 0.17	2.4 0.24	2.9 0.29	3.6 0.36	4.4 0.43	4.9 0.48	6.1 0.60	7.3 0.71	8.7 0.86	8.8 0.86	11.0 1.07	13.1 1.29	15.8 1.55
			220	60	kgfcm N.m	1.5 0.14	1.7 0.17	2.4 0.24	2.9 0.29	3.6 0.36	4.4 0.43	4.9 0.48	6.1 0.60	7.3 0.71	8.7 0.86	8.8 0.86	11.0 1.07	13.1 1.29	15.8 1.55
			220/ 240	50	kgfcm N.m	1.6 0.15	1.9 0.19	2.6 0.26	3.2 0.31	3.9 0.39	4.7 0.46	5.3 0.52	6.6 0.64	7.9 0.77	9.5 0.93	9.5 0.93	11.9 1.16	14.2 1.40	17.1 1.67

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	67.2 6.58	75.9 7.44	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	80.0 7.84	
			220	60	kgfcm N.m	67.2 6.58	75.9 7.44	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	80.0 7.84	80.0 7.84
			220/ 240	50	kgfcm N.m	67.2 6.58	75.9 7.44	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	80.0 7.84	80.0 7.84
		90	110	60	kgfcm N.m	17.5 1.72	19.8 1.94	23.8 2.33	29.7 2.91	35.6 3.49	39.6 3.88	47.5 4.66	59.4 5.82	71.3 6.99	79.2 7.76	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	17.5 1.72	19.8 1.94	23.8 2.33	29.7 2.91	35.6 3.49	39.6 3.88	47.5 4.66	59.4 5.82	71.3 6.99	79.2 7.76	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	19.0 1.86	21.5 2.10	25.7 2.52	32.2 3.15	38.6 3.78	42.9 4.20	51.5 5.05	64.4 6.31	77.2 7.57	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84	80.0 7.84

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	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44
			220	60	kgfcm N.m	19.1 1.87	22.9 2.24	28.6 2.81	34.4 3.37	47.7 4.68	57.3 5.61	68.7 6.73	95.5 9.35	81.6 8.00
			220/240	50	kgfcm N.m	18.9 1.85	22.1 2.16	26.6 2.60	30.6 3.00	40.3 3.94	45.5 4.46	53.0 5.19	69.0 6.76	75.9 7.44
		90	110	60	kgfcm N.m	4.9 0.48	5.8 0.56	6.9 0.68	8.0 0.78	10.5 1.03	11.9 1.16	13.8 1.35	18.0 1.76	19.8 1.94
			220	60	kgfcm N.m	4.9 0.48	5.8 0.56	6.9 0.68	8.0 0.78	10.5 1.03	11.9 1.16	13.8 1.35	18.0 1.76	19.8 1.94
			220/240	50	kgfcm N.m	5.3 0.52	6.2 0.61	7.5 0.74	8.7 0.85	11.4 1.11	12.9 1.26	15.0 1.47	19.5 1.91	21.5 2.10

1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.

3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

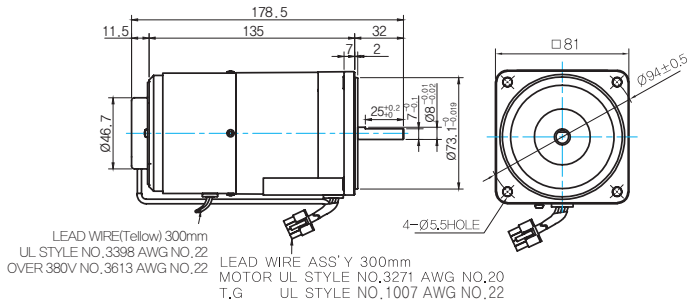
# B AC Motors

## S.C. Brake Motor 25W (□ 80mm)

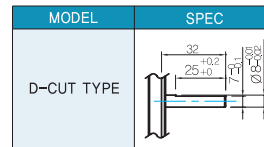
### Dimensions

#### MOTOR ONLY

- MOTOR MODEL: 8SBDD□-25 (NO FAN)

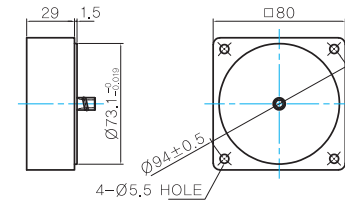


- MOTOR OUTPUT SHAFT



#### INTER-DECIMAL GEARBOX

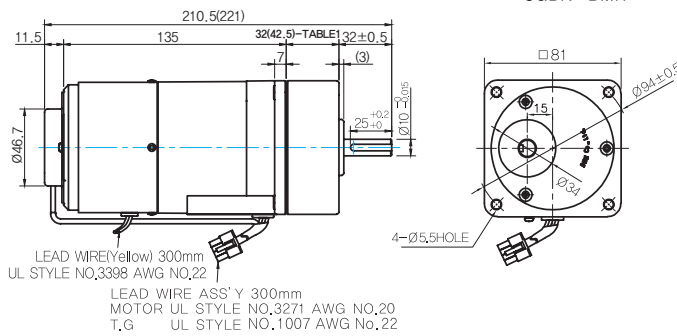
- MODEL: 8XD10□□



#### GEARED MOTOR

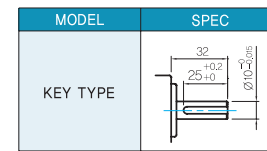
##### G TYPE GEARBOX

- MOTOR MODEL: 8SBDG□-25G (NO FAN)

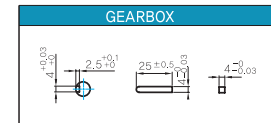


- GEARBOX MODEL: 8GBK□BMH

- GEARBOX OUTPUT SHAFT



- KEY SPEC

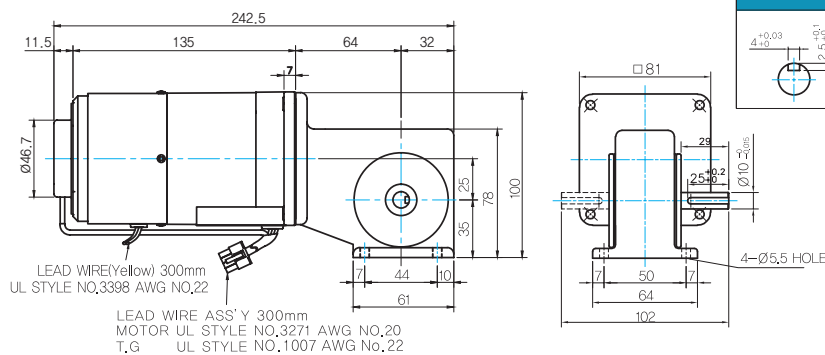


- 32(42.5)-Table1

SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

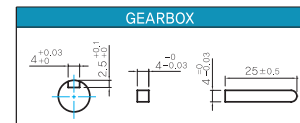
##### W TYPE GEARBOX

- MOTOR MODEL: 8SBDG□-25W (NO FAN)



- GEARBOX MODEL: 8WD□BL/BR/BRL

- KEY SPEC



#### WEIGHT

	PART	WEIGHT(Kg)
GEAR BOX	MOTOR	2.1
	8GBK3BMH ~ 8GBK18BMH	0.56
	8GBK20BMH ~ 8GBK40BMH	0.65
	8GBK50BMH ~ 8GBK360BMH	0.72
	8WD□BL/BR/BRL	0.68
	8XD10□□	0.45

## Motor Images



# 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 Lead Wire Type	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	
9SBDG1(A)-40□	40	1φ110	60	4	30min.	90-1700	3.40	0.340	3.00	0.300	0.85	0.085	16.0 / 250
9SBDG2(D)-40□	40	1φ220	60	4	30min.	90-1700	3.30	0.330	3.00	0.300	0.85	0.085	4.0 / 450
9SBDGE-40□	40	1φ220	50	4	30min.	90-1400	3.00	0.300	2.60	0.260	0.80	0.080	4.0 / 450
		1φ240					3.30	0.330	3.20	0.320	0.90	0.090	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the motor only.

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
9SBDG*-40G	9GBK □ BMH	1200	110	60	kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	30.4	36.5	43.7	43.8	54.8	65.7	78.8	87.6	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
					N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.98	3.57	4.29	4.29	5.37	6.44	7.73	8.58	9.70	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80
					kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	30.4	36.5	43.7	43.8	54.8	65.7	78.8	87.6	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.98	3.57	4.29	4.29	5.37	6.44	7.73	8.58	9.70	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	4.2	6.3	7.6	10.5	12.6	15.8	19.0	21.1	26.3	31.6	37.9	38.0	47.5	56.9	68.3	75.9	85.8	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	0.41	0.62	0.74	1.03	1.24	1.55	1.86	2.06	2.58	3.10	3.71	3.72	4.65	5.58	6.70	7.44	8.41	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	60	kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	8.6	10.3	12.4	12.4	15.5	18.6	22.3	24.8	28.1	33.7	42.1	50.5	56.1	67.3	84.2	100.0	100.0	100.0	100.0	100.0			
		N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.84	1.01	1.21	1.22	1.52	1.82	2.19	2.43	2.75	3.30	4.12	4.95	5.50	6.60	8.25	9.80	9.80	9.80	9.80	9.80			
		kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	8.6	10.3	12.4	12.4	15.5	18.6	22.3	24.8	28.1	33.7	42.1	50.5	56.1	67.3	84.2	100.0	100.0	100.0	100.0	100.0	100.0		
		N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.84	1.01	1.21	1.22	1.52	1.82	2.19	2.43	2.75	3.30	4.12	4.95	5.50	6.60	8.25	9.80	9.80	9.80	9.80	9.80	9.80		
		kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.4	26.4	31.7	39.6	47.5	52.8	63.4	79.2	95.0	100.0	100.0	100.0	100.0	100.0		
		N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.72	2.06	2.29	2.59	3.10	3.88	4.66	5.17	6.21	7.76	9.31	9.80	9.80	9.80	9.80	9.80		

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	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
					kgfcm	24.9	29.9	37.4	44.8	62.3	74.7	89.6	124.5	122.4
		N.m	2.44	2.93	3.66	4.39	6.10	7.32	8.78	12.20	12.00			
		kgfcm	26.2	30.7	37.0	42.6	56.0	63.4	73.7	96.0	105.6			
		N.m	2.57	3.01	3.62	4.18	5.49	6.21	7.23	9.41	10.35			
90	60	kgfcm	7.0	8.2	9.8	11.3	14.9	16.8	19.6	25.5	28.1			
		N.m	0.68	0.80	0.96	1.11	1.46	1.65	1.92	2.50	2.75			
		kgfcm	7.0	8.2	9.8	11.3	14.9	16.8	19.6	25.5	28.1			
N.m	0.68	0.80	0.96	1.11	1.46	1.65	1.92	2.50	2.75					
kgfcm	7.4	8.6	10.4	12.0	15.8	17.8	20.7	27.0	29.7					
N.m	0.72	0.85	1.02	1.17	1.54	1.75	2.03	2.65	2.91					

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
9SBDG*-40P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	59.4
					N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	5.82
					kgfcm	4.9	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	59.4
		N.m	0.48	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	5.82			
		kgfcm	4.2	6.3	7.6	10.5	12.6	15.8	19.0	21.1	23.7	28.5	34.2	38.0	42.9	51.5			
		N.m	0.41	0.62	0.74	1.03	1.24	1.55	1.86	2.06	2.33	2.79	3.35	3.72	4.20	5.05			
90	60	kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.3	11.2	12.4	14.0	16.8			
		N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.76	0.91	1.09	1.22	1.37	1.65			
		kgfcm	1.4	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.3	11.2	12.4	14.0	16.8			
N.m	0.13	0.20	0.24	0.34	0.40	0.51	0.61	0.67	0.76	0.91	1.09	1.22	1.37	1.65					
kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	7.3	8.8	10.5	11.7	13.2	15.8					
N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.72	0.86	1.03	1.14	1.29	1.55					

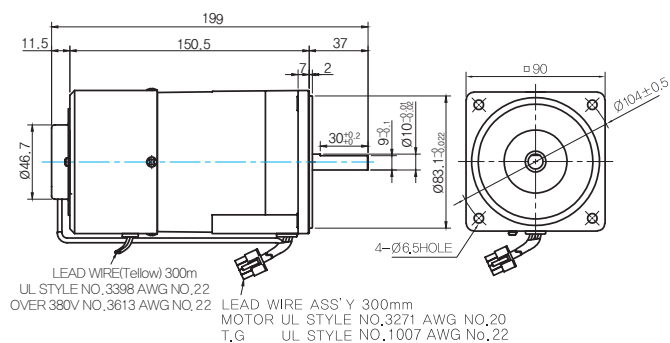
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200	
<b>9SBDG* -40P</b>	<b>9PBK□BH 9PFK□BH</b>	1200	110	60	kgfcm	71.3	79.2	99.0	118.8	132.8	159.3	177.0	200.0	200.0	200.0	200.0	
					N.m	6.99	7.76	9.70	11.64	13.01	15.61	17.35	19.60	19.60	19.60	19.60	
			220/240	50	kgfcm	61.8	68.6	85.8	103.0	115.1	138.1	153.4	184.1	200.0	200.0	200.0	200.0
					N.m	6.05	6.73	8.41	10.09	11.27	13.53	15.03	18.04	19.60	19.60	19.60	
			110	60	kgfcm	20.2	22.4	28.1	33.7	37.6	45.1	50.2	60.2	60.2	75.2	90.3	100.3
					N.m	1.98	2.20	2.75	3.30	3.69	4.42	4.91	5.90	7.37	8.85	9.83	
220/240	50	kgfcm	19.0	21.1	26.4	31.7	35.4	42.5	47.2	56.6	70.8	85.0	94.4				
		N.m	1.86	2.07	2.59	3.10	3.47	4.16	4.63	5.55	6.94	8.33	9.25				

- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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

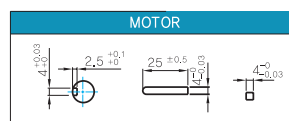
- MOTOR MODEL: 9SBDD□-40 (NO FAN)



### MOTOR OUTPUT SHAFT

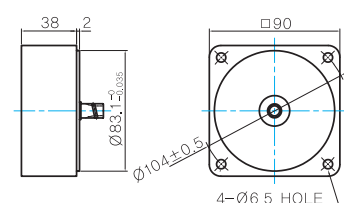
MODEL	SPEC
D-CUT TYPE	
KEY TYPE	

### KEY SPEC



### INTER-DECIMAL GEARBOX

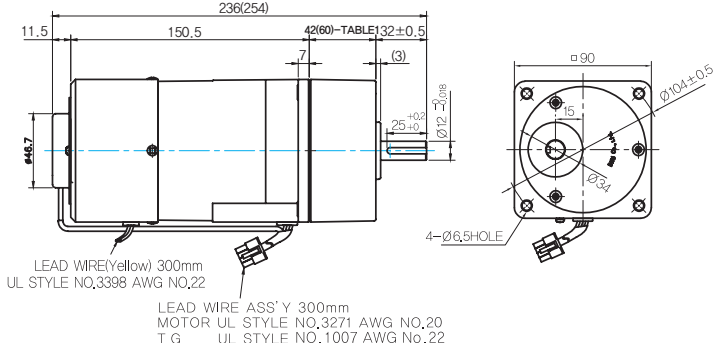
- MODEL: 9XD10□□



## GEARED MOTOR

### G TYPE GEARBOX

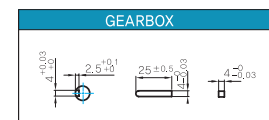
- MOTOR MODEL: 9SBDG□-40G (NO FAN)
- GEARBOX MODEL: 9GBK□BMH



### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

### KEY SPEC



### 42(60)-Table1

SIZE(mm)	GEAR RATIO
42	9GBK2BMH - 9GBK18BMH
60	9GBK20BMH - 9GBK200BMH



# B AC Motors

## S.C. Brake Motor 40W (□ 90mm)

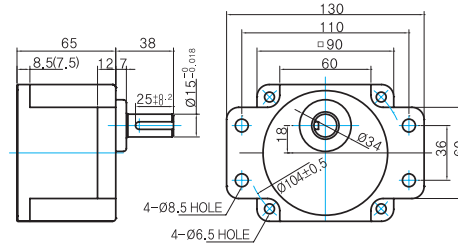
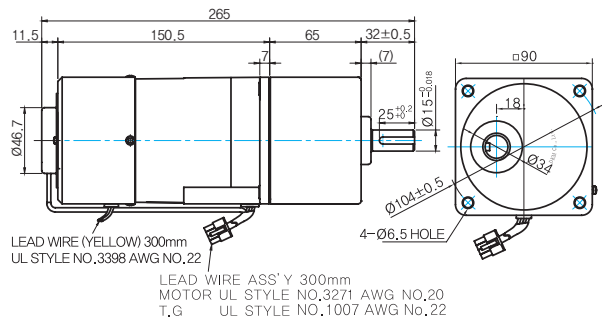
### □ P TYPE GEARBOX

● MOTOR MODEL:  
9SBDG□-40P (NO FAN)

● GEARBOX MODEL:  
9PBK□BH

● GEARBOX MODEL:  
9PFK□BH

● GEARBOX OUTPUT SHAFT



MODEL	SPEC
KEY TYPE	38 25±0.2 Ø11.5±0.08
9PBK□BH	
9PFK□BH	

● KEY SPEC

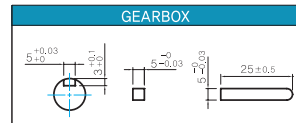
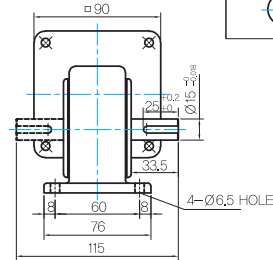
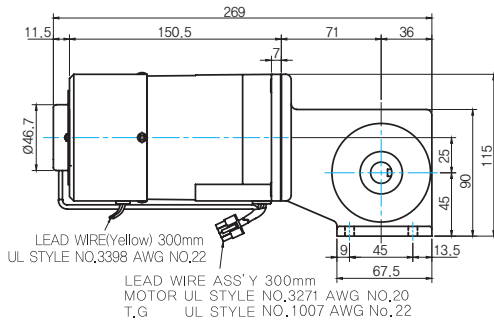
GEARBOX
5 <sup>+0.03</sup> <sub>-0</sub>
3 <sup>+0.1</sup> <sub>-0</sub>
25±0.2
15 <sup>+0.03</sup> <sub>-0</sub>
5 <sup>-0.03</sup> <sub>-0</sub>

### □ W TYPE GEARBOX

● MOTOR MODEL:  
9SBDG□-40W (NO FAN)

● GEARBOX MODEL:  
9WD□BL/BR/BRL

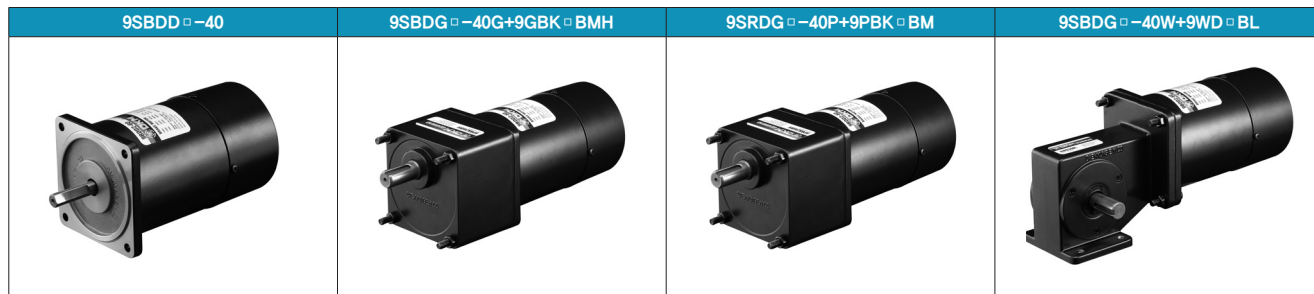
● KEY SPEC



### □ WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3.1	
GEAR BOX	9GBK2BMH ~ 9GBK18BMH	0.78
	9GBK20BMH ~ 9GBK40BMH	1.1
	9GBK50BMH ~ 9GBK200BMH	1.2
	9PB(F)K2BH ~ 9PB(F)K10BH	1.28
	9PB(F)K12.5BH ~ 9PB(F)K20BH	1.3
	9PB(F)K25BH ~ 9PB(F)K60BH	1.45
	9PB(F)K75BH ~ 9PB(F)K200BH	1.47
	9WD□BL/BR/BRL	1.0
	9XD10□	0.6

### Motor Images



S.C. Brake Motor 60W (□ 90mm)

# 60W

Speed Control  
Brake Motor  
60W(□ 90mm)

## Motor Specification

Model 9SBDG*-60F2 □ : Gear Type Shaft 9SBDD*-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
							kgfcm	N.m	1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
Lead Wire Type													
9SBDG1(A)-60F2 □	60	1 ∅110	60	4	30min.	90-1700	5.00	0.500	5.40	0.540	2.80	0.280	20.0 / 250
9SBDG2(D)-60F2 □	60	1 ∅220	60	4	30min.	90-1700	5.00	0.500	5.30	0.530	2.70	0.270	6.0 / 450
9SBDGE-60F2 □	60	1 ∅220	50	4	30min.	90-1400	5.00	0.500	5.20	0.520	2.70	0.270	6.0 / 450
		1 ∅240					5.50	0.550	5.80	0.580	2.90	0.290	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	20	25
9SBDG*-60F2P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm	8.7	13.1	15.7	21.9	26.2	32.8	39.4	43.7	49.3	59.1	71.0	78.8	89.1
					N.m	0.86	1.29	1.54	2.14	2.57	3.21	3.86	4.29	4.83	5.79	6.95	7.73	8.73
			220	60	kgfcm	8.6	12.9	15.5	21.5	25.8	32.2	38.6	42.9	48.4	58.0	69.6	77.4	87.5
		220/240	50	kgfcm	8.4	12.6	15.2	21.1	25.3	31.6	37.9	42.1	47.5	56.9	68.3	75.9	85.8	
				N.m	0.83	1.24	1.49	2.06	2.48	3.10	3.71	4.13	4.65	5.58	6.70	7.44	8.41	
				90	110	60	kgfcm	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8
N.m	0.44	0.67	0.80	1.11			1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53			
220	60	kgfcm	4.4	6.6			7.9	10.9	13.1	16.4	19.7	21.9	24.6	29.6	35.5	39.4	44.6	
		N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.41	2.90	3.48	3.86	4.37			
		220/240	50	kgfcm	4.4	6.6	7.9	10.9	13.1	16.4	19.7	21.9	24.6	29.6	35.5	39.4	44.6	
		N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.41	2.90	3.48	3.86	4.37			

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200
9SBDG*-60F2P	9PBK □ BH 9PFK □ BH	1200	110	60	kgfcm	106.9	128.3	142.6	178.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
					N.m	10.48	12.57	13.97	17.46	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
			220	60	kgfcm	104.9	125.9	139.9	174.9	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
		220/240	50	kgfcm	103.0	123.6	137.3	171.6	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
				N.m	10.09	12.11	13.45	16.82	19.60	19.60	19.60	19.60	19.60	19.60	19.60		
				90	110	60	kgfcm	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0
N.m	5.43	6.52	7.24	9.06			10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60			
220	60	kgfcm	53.5	64.2			71.3	89.1	106.9	119.5	143.4	159.3	191.2	200.0	200.0		
		N.m	5.24	6.29	6.99	8.73	10.48	11.71	14.05	15.61	18.73	19.60	19.60				
		220/240	50	kgfcm	53.5	64.2	71.3	89.1	106.9	119.5	143.4	159.3	191.2	200.0	200.0		
		N.m	5.24	6.29	6.99	8.73	10.48	11.71	14.05	15.61	18.73	19.60	19.60				

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
9SBDG*-60F2H	9HBK □ BH 9HFK □ BH	1200	110	60	kgfcm	13.1	15.7	21.9	26.2	32.8	39.4	43.7	49.3	59.1	71.0	78.8	89.1	106.9
					N.m	1.29	1.54	2.14	2.57	3.21	3.86	4.29	4.83	5.79	6.95	7.73	8.73	10.48
			220	60	kgfcm	12.9	15.5	21.5	25.8	32.2	38.6	42.9	48.4	58.0	69.6	77.4	87.5	104.9
		220/240	50	kgfcm	12.6	15.2	21.1	25.3	31.6	37.9	42.1	47.5	56.9	68.3	75.9	85.8	103.0	
				N.m	1.24	1.49	2.06	2.48	3.10	3.71	4.13	4.65	5.58	6.70	7.44	8.41	10.09	
				90	110	60	kgfcm	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9
N.m	0.67	0.80	1.11	1.33			1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53	5.43			
220	60	kgfcm	6.6	7.9			10.9	13.1	16.4	19.7	21.9	24.6	29.6	35.5	39.4	44.6	53.5	
		N.m	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.41	2.90	3.48	3.86	4.37	5.24			
		220/240	50	kgfcm	6.6	7.9	10.9	13.1	16.4	19.7	21.9	24.6	29.6	35.5	39.4	44.6	53.5	
		N.m	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.41	2.90	3.48	3.86	4.37	5.24			

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200
9SBDG* 60F2H	9HBK □ BH	1200	110	60	kgfcm	128.3	142.6	178.2	213.8	239.0	286.7	300.0	300.0	300.0	300.0	300.0
					N.m	12.57	13.97	17.46	20.96	23.42	28.10	29.40	29.40	29.40	29.40	29.40
			220	60	kgfcm	125.9	139.9	174.9	209.9	234.5	281.4	300.0	300.0	300.0	300.0	300.0
		N.m			12.34	13.71	17.14	20.57	22.98	27.58	29.40	29.40	29.40	29.40	29.40	29.40
		220/240	50	kgfcm	123.6	137.3	171.6	205.9	230.1	276.1	300.0	300.0	300.0	300.0	300.0	
				N.m	12.11	13.45	16.82	20.18	22.55	27.06	29.40	29.40	29.40	29.40	29.40	29.40
	90	9HFK □ BH	110	60	kgfcm	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	247.8	297.4	300.0
					N.m	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	24.28	29.14	29.40
			220	60	kgfcm	64.2	71.3	89.1	106.9	119.5	143.4	159.3	191.2	239.0	286.7	300.0
N.m	6.29	6.99			8.73	10.48	11.71	14.05	15.61	18.73	23.42	28.10	29.40	29.40		
220/240	50	kgfcm	64.2	71.3	89.1	106.9	119.5	143.4	159.3	191.2	239.0	286.7	300.0			
		N.m	6.29	6.99	8.73	10.48	11.71	14.05	15.61	18.73	23.42	28.10	29.40	29.40		

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SBDG* 60F2W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm	44.3	51.8	62.4	71.9	94.5	106.9	124.4	142.9	122.4
					N.m	4.34	5.08	6.11	7.05	9.26	10.48	12.19	14.00	12.00
			220	60	kgfcm	43.5	50.9	61.2	70.6	92.8	104.9	122.1	142.9	122.4
		N.m			4.26	4.99	6.00	6.92	9.09	10.28	11.97	14.00	12.00	
		220/240	50	kgfcm	47.6	55.7	67.0	77.3	101.5	114.8	133.6	142.9	122.4	
				N.m	4.66	5.46	6.57	7.57	9.95	11.25	13.10	14.00	12.00	
		90	110	60	kgfcm	23.0	26.9	32.3	37.3	49.0	55.4	64.5	84.0	92.4
					N.m	2.25	2.63	3.17	3.66	4.80	5.43	6.32	8.23	9.06
			220	60	kgfcm	22.1	25.9	31.2	36.0	47.3	53.5	62.2	81.0	89.1
N.m	2.17	2.54			3.06	3.52	4.63	5.24	6.10	7.94	8.73			
220/240	50	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			

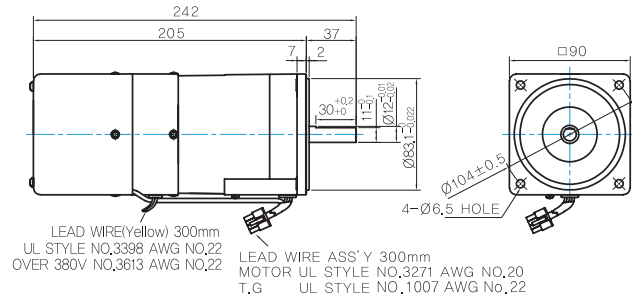
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SBDG* 60F2WH	9WHD □ -030	1200	110	60	kgfcm	18.8	27.2	35.0	49.2	62.2	71.3	82.9	102.0	116.6	129.6	132.7
					N.m	1.84	2.67	3.43	4.83	6.10	6.99	8.13	9.99	11.43	12.70	13.00
			220	60	kgfcm	18.4	26.7	34.3	48.3	61.1	70.0	81.4	100.1	114.5	127.2	132.7
		N.m			1.81	2.62	3.37	4.74	5.98	6.86	7.98	9.81	11.22	12.47	13.00	
		220/240	50	kgfcm	20.2	29.2	37.6	52.9	66.8	76.6	89.1	109.5	125.3	139.2	132.7	
				N.m	1.98	2.86	3.68	5.18	6.55	7.50	8.73	10.73	12.28	13.64	13.00	
		90	110	60	kgfcm	12.2	17.6	22.7	31.9	40.3	46.2	53.8	66.1	75.6	84.0	98.6
					N.m	1.19	1.73	2.22	3.13	3.95	4.53	5.27	6.48	7.41	8.23	9.66
			220	60	kgfcm	11.7	17.0	21.9	30.8	38.9	44.6	51.8	63.7	72.9	81.0	95.0
N.m	1.15	1.67			2.14	3.02	3.81	4.37	5.08	6.24	7.14	7.94	9.31			
220/240	50	kgfcm	12.6	18.3	23.5	33.1	41.8	47.9	55.7	68.4	78.3	87.0	102.1			
		N.m	1.24	1.79	2.30	3.24	4.09	4.69	5.46	6.71	7.67	8.53	10.00			

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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

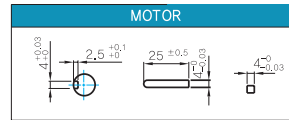
- MOTOR MODEL:  
9SBDD□-60F2 (POWERFUL FAN)



### MOTOR OUTPUT SHAFT

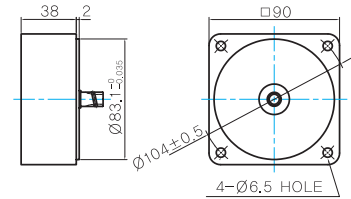
MODEL	SPEC
D-CUT TYPE	
9SBDD□-60F2	
KEY TYPE	
9SBDK□-60F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

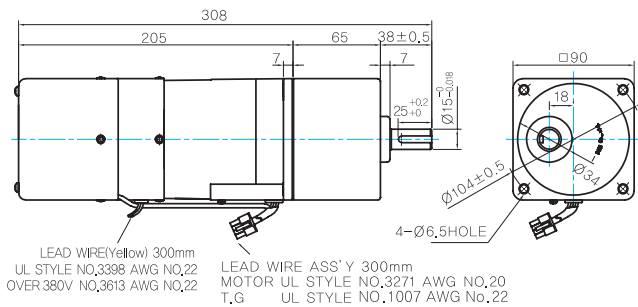
- MODEL: 9XD10□



## GEARED MOTOR

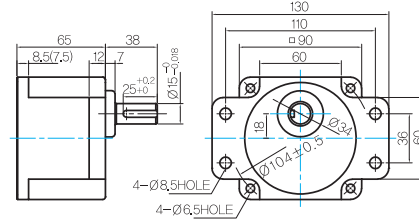
### P TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-60F2P (POWERFUL FAN)



- GEARBOX MODEL:  
9PBK□BH

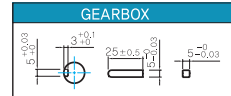
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

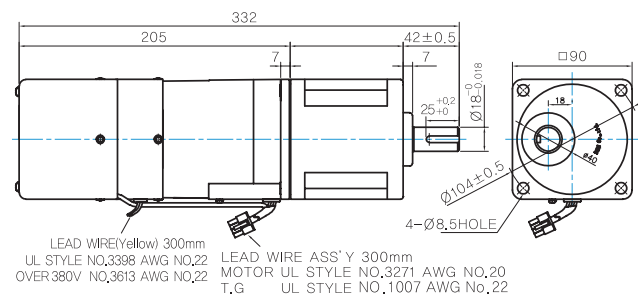
MODEL	SPEC
KEY TYPE	
9PBK□BH 9PFK□BH	

### KEY SPEC



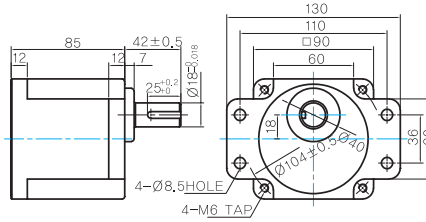
### H TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-60F2H (POWERFUL FAN)



- GEARBOX MODEL:  
9HBK□BH

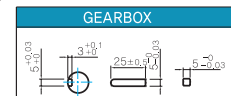
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

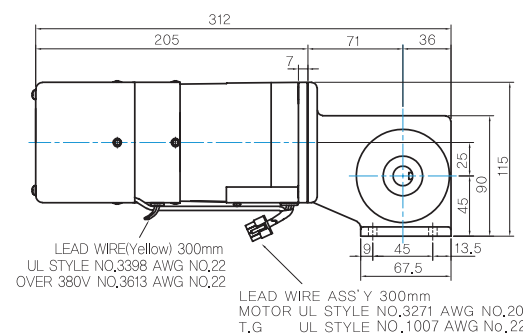
MODEL	SPEC
KEY TYPE	
9HBK□BH 9HFK□BH	

### KEY SPEC



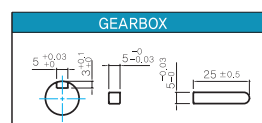
### W TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-60F2W (POWERFUL FAN)



- GEARBOX MODEL:  
9WD□BL/BR/BRL

### KEY SPEC

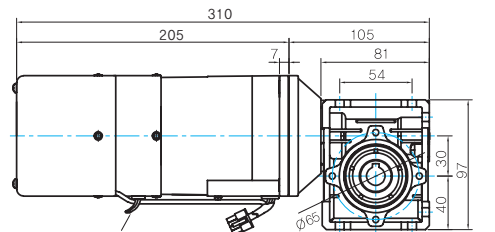


# B AC Motors

## S.C. Brake Motor 60W (□ 90mm)

### WH TYPE GEARBOX

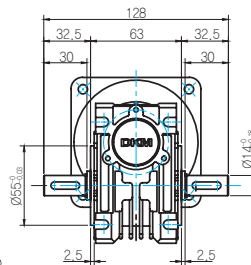
● MOTOR MODEL:  
9SBDG□-60F2WH (POWERFUL FAN)



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

LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.  
T,G UL STYLE NO.1007 AWG No.

● GEARBOX MODEL:  
9WHD□-030

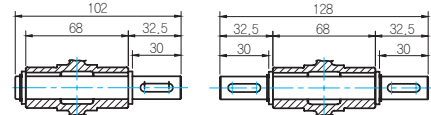


INPUT



OUTPUT

● SHAFT



Unidirectional

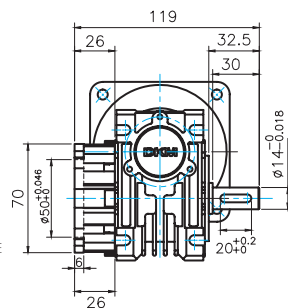
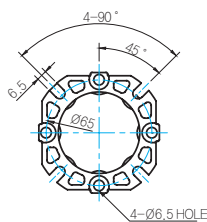
Bi-directional

### WEIGHT

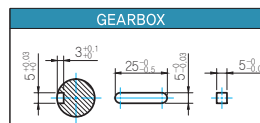
PART		WEIGHT(Kg)
MOTOR		3,40
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12.5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9HB(F)K3BH - 9HB(F)K10BH	1,62
	9HB(F)K12.5BH - 9HB(F)K20BH	1,68
	9HB(F)K25BH - 9HB(F)K60BH	1,73
	9HB(F)K75BH - 9HB(F)K200BH	1,78
	9WD□BL/BR/BRL	1,0
	9WHD□-030	1,2
9XD10□□	0,6	

\* The output flange and shaft are sold separately

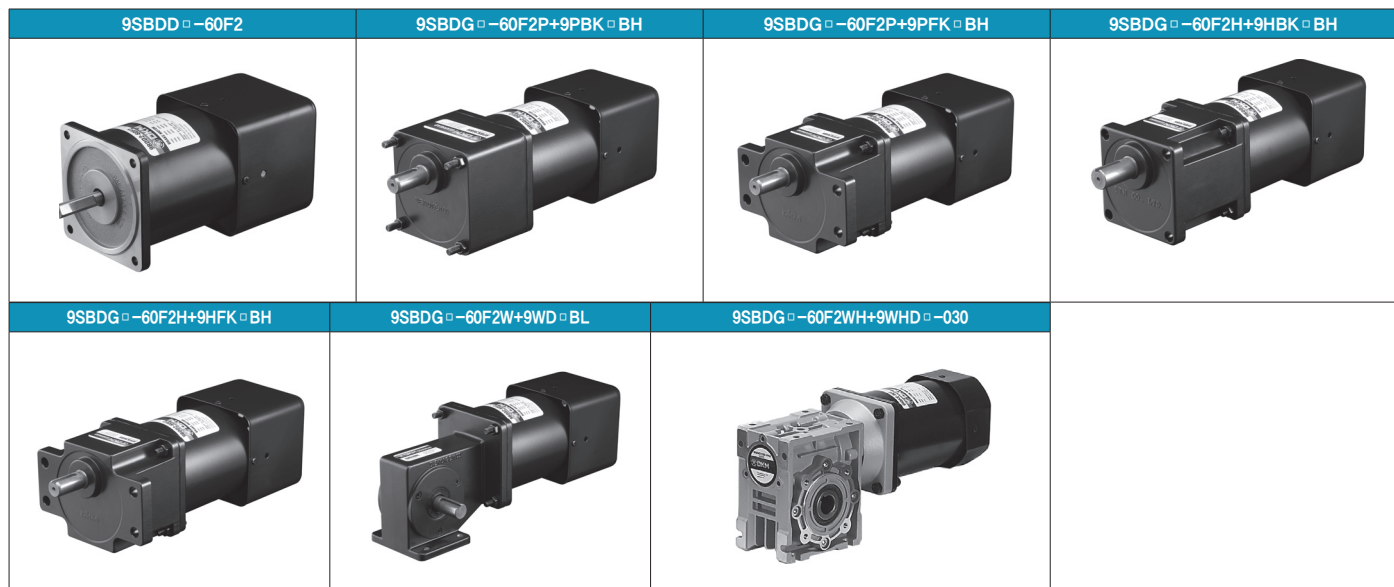
● FLANGE



● KEY SPEC



### Motor Images



S.C. Brake Motor 90W (□ 90mm)

S.C. Brake Motor 90W (□ 90mm)

# 90W

Speed Control  
Brake Motor  
90W(□ 90mm)

## Motor Specification

Model 9SBDG*-90F2□: Gear Type Shaft 9SBDG*-90F2□: 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
							kgfcm	N.m	1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
Lead Wire Type													
9SBDG1(A)-90F2□	90	1∅110	60	4	30min.	90-1700	6.00	0.600	7.30	0.730	3.00	0.300	25.0 / 250
9SBDG2(D)-90F2□	90	1∅220	60	4	30min.	90-1700	6.00	0.600	7.30	0.730	3.00	0.300	6.5 / 450
9SBDGE-90F2□	90	1∅220	50	4	30min.	90-1400	5.50	0.550	7.00	0.700	2.80	0.280	6.5 / 450
		1∅240					6.00	0.600	7.50	0.750	3.30	0.330	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	20
9SBDG*-90F2P	9PBK□BH	1200	110	60	kgfcm N.m	11.8 1.16	17.7 1.74	21.3 2.09	29.6 2.90	35.5 3.48	44.3 4.35	53.2 5.22	59.1 5.79	66.6 6.53	79.9 7.83	95.9 9.40	106.6 10.44
			220	60	kgfcm N.m	11.8 1.16	17.7 1.74	21.3 2.09	29.6 2.90	35.5 3.48	44.3 4.35	53.2 5.22	59.1 5.79	66.6 6.53	79.9 7.83	95.9 9.40	106.6 10.44
			220/ 240	50	kgfcm N.m	11.3 1.11	17.0 1.67	20.4 2.00	28.4 2.78	34.0 3.33	42.5 4.17	51.0 5.00	56.7 5.56	63.9 6.26	76.7 7.51	92.0 9.01	102.2 10.02
	9PFB□BH	90	110	60	kgfcm N.m	4.9 0.48	7.3 0.71	8.7 0.86	12.2 1.19	14.6 1.43	18.2 1.79	21.9 2.14	24.3 2.38	27.4 2.68	32.9 3.22	39.4 3.86	43.8 4.29
			220	60	kgfcm N.m	4.9 0.48	7.3 0.71	8.7 0.86	12.2 1.19	14.6 1.43	18.2 1.79	21.9 2.14	24.3 2.38	27.4 2.68	32.9 3.22	39.4 3.86	43.8 4.29
			220/ 240	50	kgfcm N.m	4.5 0.44	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01

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	1200	110	60	kgfcm N.m	120.5 11.80	144.5 14.16	173.4 17.00	192.7 18.89	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	120.5 11.80	144.5 14.16	173.4 17.00	192.7 18.89	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	115.5 11.32	138.6 13.58	166.3 16.30	184.8 18.11	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
	9PFB□BH	90	110	60	kgfcm N.m	49.5 4.85	59.4 5.82	71.3 6.99	79.2 7.76	99.0 9.70	118.8 11.64	132.8 13.01	159.3 15.61	177.0 17.35	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	49.5 4.85	59.4 5.82	71.3 6.99	79.2 7.76	99.0 9.70	118.8 11.64	132.8 13.01	159.3 15.61	177.0 17.35	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	46.2 4.53	55.4 5.43	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
9SBDG*-90F2H	9HBK□BH	1200	110	60	kgfcm N.m	17.7 1.74	21.3 2.09	29.6 2.90	35.5 3.48	44.3 4.35	53.2 5.22	59.1 5.79	66.6 6.53	79.9 7.83	95.9 9.40	106.6 10.44	120.5 11.80	144.5 14.16
			220	60	kgfcm N.m	17.7 1.74	21.3 2.09	29.6 2.90	35.5 3.48	44.3 4.35	53.2 5.22	59.1 5.79	66.6 6.53	79.9 7.83	95.9 9.40	106.6 10.44	120.5 11.80	144.5 14.16
			220/ 240	50	kgfcm N.m	17.0 1.67	20.4 2.00	28.4 2.78	34.0 3.33	42.5 4.17	51.0 5.00	56.7 5.56	63.9 6.26	76.7 7.51	92.0 9.01	102.2 10.02	115.5 11.32	138.6 13.58
	9HFB□BH	90	110	60	kgfcm N.m	7.3 0.71	8.7 0.86	12.2 1.19	14.6 1.43	18.2 1.79	21.9 2.14	24.3 2.38	27.4 2.68	32.9 3.22	39.4 3.86	43.8 4.29	49.5 4.85	59.4 5.82
			220	60	kgfcm N.m	7.3 0.71	8.7 0.86	12.2 1.19	14.6 1.43	18.2 1.79	21.9 2.14	24.3 2.38	27.4 2.68	32.9 3.22	39.4 3.86	43.8 4.29	49.5 4.85	59.4 5.82
			220/ 240	50	kgfcm N.m	6.8 0.67	8.2 0.80	11.3 1.11	13.6 1.33	17.0 1.67	20.4 2.00	22.7 2.22	25.6 2.50	30.7 3.00	36.8 3.61	40.9 4.01	46.2 4.53	55.4 5.43

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

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200	
9SBDG*–90F2H	9HBK □ BH	1200	110	60	kgfcm N.m	173.4 17.00	192.7 18.89	240.9 23.61	289.1 28.33	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	173.4 17.00	192.7 18.89	240.9 23.61	289.1 28.33	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	166.3 16.30	184.8 18.11	231.0 22.64	277.2 27.17	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
	9HFK □ BH	90	110	60	kgfcm N.m	71.3 6.99	79.2 7.76	99.0 9.70	118.8 11.64	132.8 13.01	159.3 15.61	177.0 17.35	212.4 20.82	265.5 26.02	300.0 29.40	300.0 29.40	300.0 29.40
			220	60	kgfcm N.m	71.3 6.99	79.2 7.76	99.0 9.70	118.8 11.64	132.8 13.01	159.3 15.61	177.0 17.35	212.4 20.82	265.5 26.02	300.0 29.40	300.0 29.40	300.0 29.40
			220/240	50	kgfcm N.m	66.5 6.52	73.9 7.24	92.4 9.06	110.9 10.87	123.9 12.14	148.7 14.57	165.2 16.19	198.2 19.43	247.8 24.28	297.4 29.14	300.0 29.40	

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60
9SBDG*–90F2W	9WD □ BL/ □ BR/ □ BRL	1200	110	60	kgfcm N.m	59.9 5.87	70.1 6.87	84.3 8.26	97.2 9.53	127.8 12.52	144.5 14.16	153.1 15.00	142.9 14.00	122.4 12.00
			220	60	kgfcm N.m	59.9 5.87	70.1 6.87	84.3 8.26	97.2 9.53	127.8 12.52	144.5 14.16	153.1 15.00	142.9 14.00	122.4 12.00
			220/240	50	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
		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	27.1 2.65	31.7 3.10	38.1 3.74	44.0 4.31	57.8 5.66	65.3 6.40	76.0 7.45	99.0 9.70	108.9 10.67

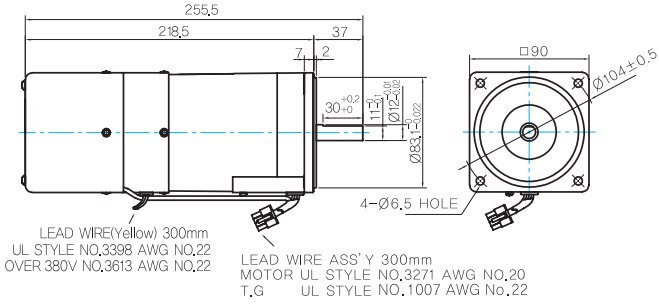
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SBG*–90F2WH	9WHD □ –030	1200	110	60	kgfcm N.m	25.4 2.49	36.8 3.61	47.3 4.64	66.6 6.52	84.1 8.24	96.4 9.44	112.1 10.99	137.8 13.51	157.7 15.45	163.3 16.00	132.7 13.00
			220	60	kgfcm N.m	25.4 2.49	36.8 3.61	47.3 4.64	66.6 6.52	84.1 8.24	96.4 9.44	112.1 10.99	137.8 13.51	157.7 15.45	163.3 16.00	132.7 13.00
			220/240	50	kgfcm N.m	26.1 2.56	37.8 3.70	48.6 4.76	68.4 6.70	86.4 8.47	99.0 9.70	115.2 11.29	141.6 13.88	162.0 15.88	163.3 16.00	132.7 13.00
		90	110	60	kgfcm N.m	10.4 1.02	15.1 1.48	19.4 1.91	27.4 2.68	34.6 3.39	39.6 3.88	46.1 4.52	56.6 5.55	64.8 6.35	72.0 7.06	84.5 8.28
			220	60	kgfcm N.m	10.4 1.02	15.1 1.48	19.4 1.91	27.4 2.68	34.6 3.39	39.6 3.88	46.1 4.52	56.6 5.55	64.8 6.35	72.0 7.06	84.5 8.28
			220/240	50	kgfcm N.m	11.5 1.13	16.6 1.63	21.4 2.10	30.1 2.95	38.0 3.73	43.6 4.27	50.7 4.97	62.3 6.11	71.3 6.99	79.2 7.76	92.9 9.11

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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

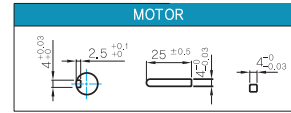
- MOTOR MODEL:  
9SBDD□-90F2 (POWERFUL FAN)



### MOTOR OUTPUT SHAFT

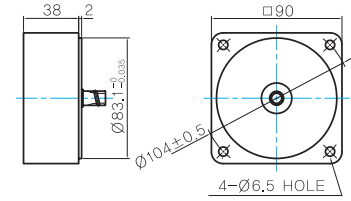
MODEL	SPEC
D-CUT TYPE	
9SBDD□-90F2	
KEY TYPE	
9SBDK□-90F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

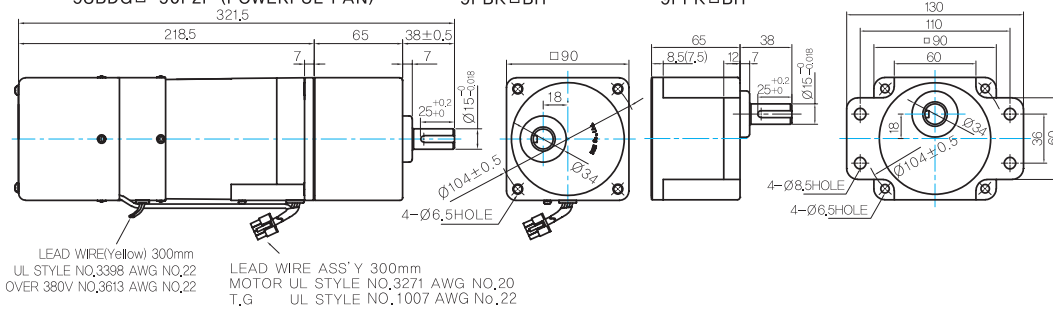
- MODEL: 9XD10□□



### GEARED MOTOR

#### P TYPE GEARBOX

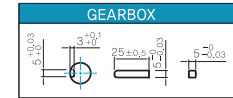
- MOTOR MODEL:  
9SBDG□-90F2P (POWERFUL FAN)
- GEARBOX MODEL:  
9PBK□BH
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

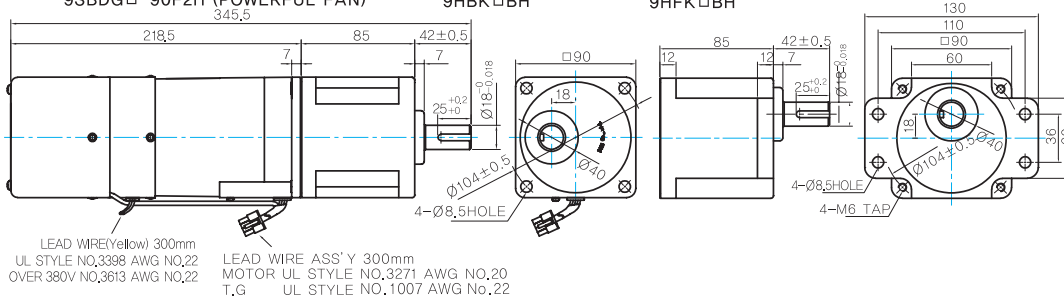
MODEL	SPEC
KEY TYPE	
9PBK□BH 9PFK□BH	

### KEY SPEC



#### H TYPE GEARBOX

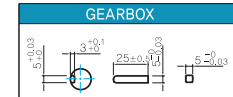
- MOTOR MODEL:  
9SBDG□-90F2H (POWERFUL FAN)
- GEARBOX MODEL:  
9HBK□BH
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

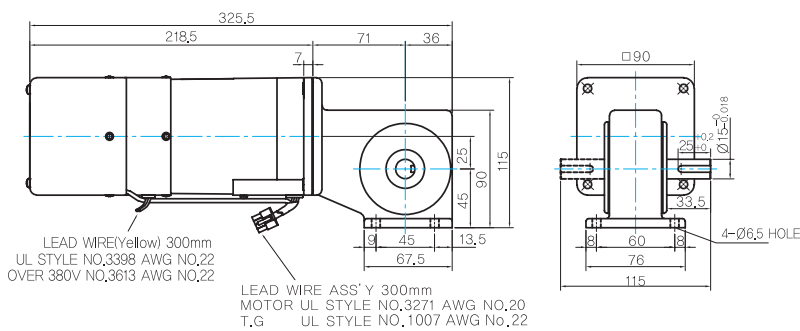
MODEL	SPEC
KEY TYPE	
9HBK□BH 9HFK□BH	

### KEY SPEC

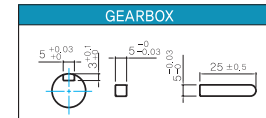


#### W TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-90F2W (POWERFUL FAN)
- GEARBOX MODEL:  
9WD□BL/BR/BRL



### KEY SPEC



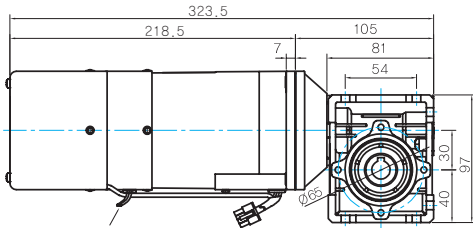


# B AC Motors

## S.C. Brake Motor 90W (□ 90mm)

### WH TYPE GEARBOX

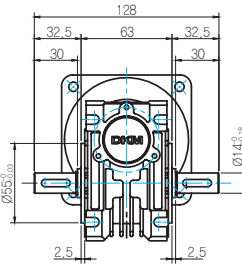
● MOTOR MODEL:  
9SBDG□-90F2WH (POWERFUL FAN)



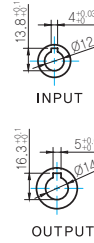
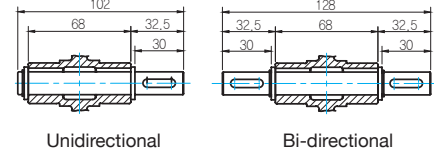
LEAD WIRE(Yellow) 300mm  
UL STYLE NO.3398 AWG NO.22  
OVER 380V NO.3613 AWG NO.22

LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.  
T,G UL STYLE NO.1007 AWG No

● GEARBOX MODEL:  
9WHD□-030



● SHAFT

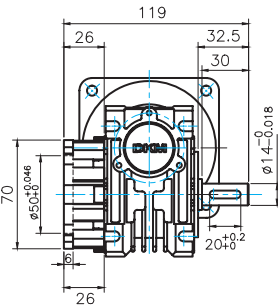
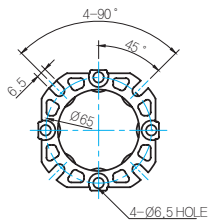


### WEIGHT

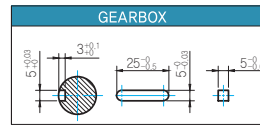
PART	WEIGHT(kg)	
MOTOR	3.7	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9HB(F)K3BH - 9HB(F)K10BH	1.62
	9HB(F)K12.5BH - 9HB(F)K20BH	1.68
	9HB(F)K25BH - 9HB(F)K60BH	1.73
	9HB(F)K75BH - 9HB(F)K200BH	1.78
	9WD□BL/BR/BRL	1.0
	9WHD□-030	1.2
9XD10□	0.6	

\* The output flange and shaft are sold separately

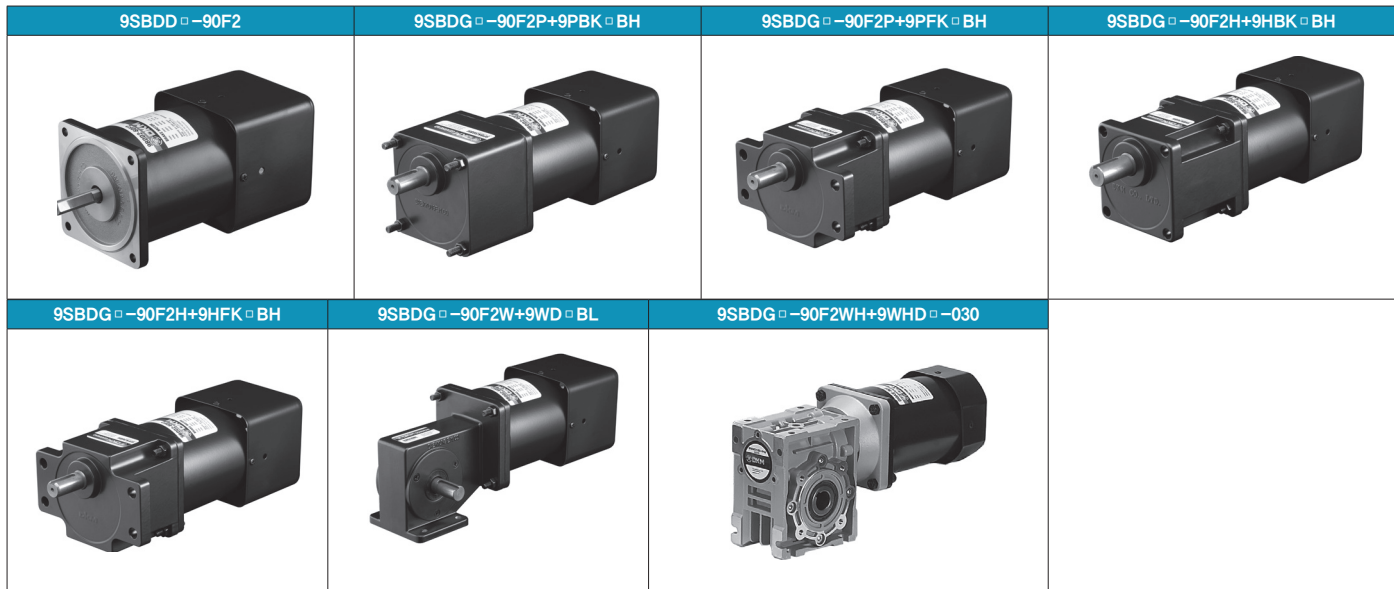
● FLANGE



● KEY SPEC



### Motor Images



# 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
									1200r/min		90r/min		
							kgfcm	N.m	kgfcm	N.m	kgfcm	N.m	
Lead Wire Type													
9SBDG1(A)–120F2□	120	1ϕ110	60	4	30min.	90–1700	7.80	0.780	8.20	0.820	3.60	0.360	30.0 / 250
9SBDG2(D)–120F2□	120	1ϕ220	60	4	30min.	90–1700	7.60	0.760	8.00	0.800	3.30	0.330	7.0 / 450
9SBDGE–120F2□	120	1ϕ220	50	4	30min.	90–1400	6.00	0.600	7.50	0.750	3.30	0.330	7.0 / 450
		1ϕ240					6.50	0.650	8.00	0.800	3.80	0.380	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D–Cut Type Shaft is for using the 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	20
9SBDG*–120F2P	9PBK □ BH	1200	110	60	kgfcm N.m	13.3 1.30	19.9 1.95	23.9 2.34	33.2 3.25	39.9 3.91	49.8 4.88	59.8 5.86	66.4 6.51	74.8 7.33	89.8 8.80	107.7 10.56	119.7 11.73
			220	60	kgfcm N.m	13.0 1.27	19.4 1.91	23.3 2.29	32.4 3.18	38.9 3.81	48.6 4.76	58.3 5.72	64.8 6.35	73.0 7.15	87.6 8.58	105.1 10.30	116.8 11.45
			220/ 240	50	kgfcm N.m	12.2 1.19	18.2 1.79	21.9 2.14	30.4 2.98	36.5 3.57	45.6 4.47	54.7 5.36	60.8 5.95	68.4 6.71	82.1 8.05	98.6 9.66	109.5 10.73
	9PFB □ BH	90	110	60	kgfcm N.m	5.8 0.57	8.7 0.86	10.5 1.03	14.6 1.43	17.5 1.71	21.9 2.14	26.2 2.57	29.2 2.86	32.9 3.22	39.4 3.86	47.3 4.64	52.6 5.15
			220	60	kgfcm N.m	5.3 0.52	8.0 0.79	9.6 0.94	13.4 1.31	16.0 1.57	20.0 1.96	24.1 2.36	26.7 2.62	30.1 2.95	36.1 3.54	43.4 4.25	48.2 4.72
			220/ 240	50	kgfcm N.m	5.3 0.52	8.0 0.79	9.6 0.94	13.4 1.31	16.0 1.57	20.0 1.96	24.1 2.36	26.7 2.62	30.1 2.95	36.1 3.54	43.4 4.25	48.2 4.72

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	1200	110	60	kgfcm N.m	135.3 13.26	162.4 15.91	194.8 19.09	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	132.0 12.94	158.4 15.52	190.1 18.63	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	200.0 19.60
			220/ 240	50	kgfcm N.m	123.8 12.13	148.5 14.55	178.2 17.46	198.0 19.40	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
	9PFB □ BH	90	110	60	kgfcm N.m	59.4 5.82	71.3 6.99	85.5 8.38	95.0 9.31	118.8 11.64	142.6 13.97	159.3 15.61	191.2 18.73	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	54.5 5.34	65.3 6.40	78.4 7.68	87.1 8.54	108.9 10.67	130.7 12.81	146.0 14.31	175.2 17.17	194.7 19.08	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	54.5 5.34	65.3 6.40	78.4 7.68	87.1 8.54	108.9 10.67	130.7 12.81	146.0 14.31	175.2 17.17	194.7 19.08	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
9SBDG*–120F2H	9HBK □ BH	1200	110	60	kgfcm N.m	19.9 1.95	23.9 2.34	33.2 3.25	39.9 3.91	49.8 4.88	59.8 5.86	66.4 6.51	74.8 7.33	89.8 8.80	107.7 10.56	119.7 11.73	135.3 13.26	162.4 15.91
			220	60	kgfcm N.m	19.4 1.91	23.3 2.29	32.4 3.18	38.9 3.81	48.6 4.76	58.3 5.72	64.8 6.35	73.0 7.15	87.6 8.58	105.1 10.30	116.8 11.45	132.0 12.94	158.4 15.52
			220/ 240	50	kgfcm N.m	18.2 1.79	21.9 2.14	30.4 2.98	36.5 3.57	45.6 4.47	54.7 5.36	60.8 5.95	68.4 6.71	82.1 8.05	98.6 9.66	109.5 10.73	123.8 12.13	148.5 14.55
	9HFB □ BH	90	110	60	kgfcm N.m	8.7 0.86	10.5 1.03	14.6 1.43	17.5 1.71	21.9 2.14	26.2 2.57	29.2 2.86	32.9 3.22	39.4 3.86	47.3 4.64	52.6 5.15	59.4 5.82	71.3 6.99
			220	60	kgfcm N.m	8.0 0.79	9.6 0.94	13.4 1.31	16.0 1.57	20.0 1.96	24.1 2.36	26.7 2.62	30.1 2.95	36.1 3.54	43.4 4.25	48.2 4.72	54.5 5.34	65.3 6.40
			220/ 240	50	kgfcm N.m	8.0 0.79	9.6 0.94	13.4 1.31	16.0 1.57	20.0 1.96	24.1 2.36	26.7 2.62	30.1 2.95	36.1 3.54	43.4 4.25	48.2 4.72	54.5 5.34	65.3 6.40

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

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200		
9SBDG*–120F2H	9HBK □ BH 9HFK □ BH	1200	110	60	kgfcm	194.8	216.5	270.6	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0		
					N.m	19.09	21.22	26.52	29.40	29.40	29.40	29.40	29.40	29.40	29.40			
			220	60	kgfcm	190.1	211.2	264.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m			18.63	20.70	25.87	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40		
		90	220/240	50	kgfcm	178.2	198.0	247.5	297.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	17.46	19.40	24.26	29.11	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
110	60				kgfcm	85.5	95.0	118.8	142.6	159.3	191.2	212.4	254.9	300.0	300.0	300.0	300.0	
		N.m	8.38	9.31	11.64	13.97	15.61	18.73	20.82	24.98	29.40	29.40	29.40	29.40				
220	60	kgfcm	78.4	87.1	108.9	130.7	146.0	175.2	194.7	233.6	292.1	300.0	300.0	300.0				
		N.m	7.68	8.54	10.67	12.81	14.31	17.17	19.08	22.90	28.62	29.40	29.40	29.40				
		220/240	50	kgfcm	78.4	87.1	108.9	130.7	146.0	175.2	194.7	233.6	292.1	300.0	300.0			
N.m	7.68			8.54	10.67	12.81	14.31	17.17	19.08	22.90	28.62	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	67.2	78.7	94.7	109.2	143.5	162.4	153.1	142.9	122.4
					N.m	6.59	7.71	9.28	10.70	14.06	15.91	15.00	14.00	12.00
			220	60	kgfcm	65.6	76.8	92.4	106.6	140.0	158.4	153.1	142.9	122.4
		N.m			6.43	7.53	9.06	10.44	13.72	15.52	15.00	14.00	12.00	
		90	220/240	50	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
110	60				kgfcm	29.5	34.6	41.6	48.0	63.0	71.3	82.9	108.0	122.4
		N.m	2.89	3.39	4.07	4.70	6.17	6.99	8.13	10.58	12.00			
220	60	kgfcm	27.1	31.7	38.1	44.0	57.8	65.3	76.0	99.0	122.4			
		N.m	2.65	3.10	3.74	4.31	5.66	6.40	7.45	9.70	12.00			
		220/240	50	kgfcm	27.1	31.7	38.1	44.0	57.8	65.3	76.0	99.0	122.4	
N.m	2.65			3.10	3.74	4.31	5.66	6.40	7.45	9.70	12.00			

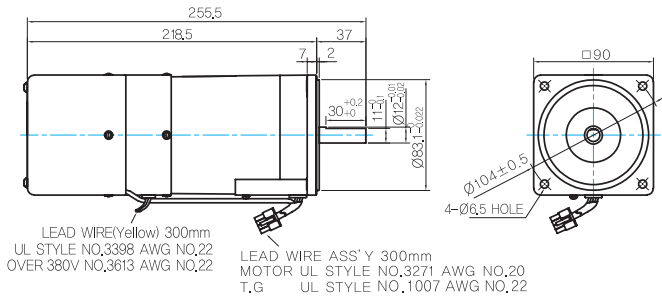
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80
9SBDG*–120F2WH	9WHD □ –030	1200	110	60	kgfcm	28.5	41.3	53.1	74.8	94.5	108.2	126.0	154.8	173.5	163.3	132.7
					N.m	2.80	4.05	5.21	7.33	9.26	10.61	12.34	15.17	17.00	16.00	13.00
			220	60	kgfcm	27.8	40.3	51.8	73.0	92.2	105.6	122.9	151.0	173.5	163.3	132.7
		N.m			2.73	3.95	5.08	7.15	9.03	10.35	12.04	14.80	17.00	16.00	13.00	
		90	220/240	50	kgfcm	27.8	40.3	51.8	73.0	92.2	105.6	122.9	151.0	173.5	163.3	132.7
					N.m	2.73	3.95	5.08	7.15	9.03	10.35	12.04	14.80	17.00	16.00	13.00
110	60				kgfcm	12.5	18.1	23.3	32.8	41.5	47.5	55.3	68.0	77.8	86.4	101.4
		N.m	1.23	1.78	2.29	3.22	4.06	4.66	5.42	6.66	7.62	8.47	9.93			
220	60	kgfcm	11.5	16.6	21.4	30.1	38.0	43.6	50.7	62.3	71.3	79.2	92.9			
		N.m	1.13	1.63	2.10	2.95	3.73	4.27	4.97	6.11	6.99	7.76	9.11			
		220/240	50	kgfcm	13.2	19.2	24.6	34.7	43.8	50.2	58.4	71.7	82.1	91.2	107.0	
N.m	1.30			1.88	2.41	3.40	4.29	4.92	5.72	7.03	8.04	8.94	10.49			

- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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

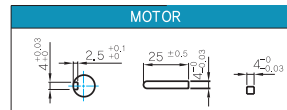
- MOTOR MODEL:  
9SBDD□-120F2 (POWERFUL FAN)



### MOTOR OUTPUT SHAFT

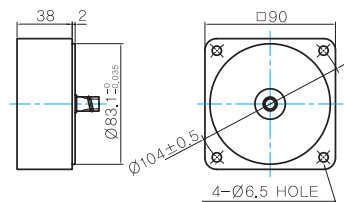
MODEL	SPEC
D-CUT TYPE 9SBDD□-120F2	
KEY TYPE 9SBDK□-120F2	

### KEY SPEC



### INTER-DECIMAL GEARBOX

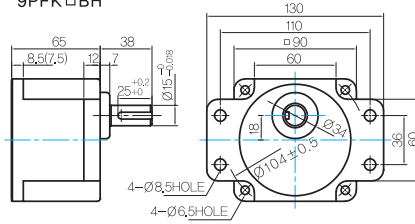
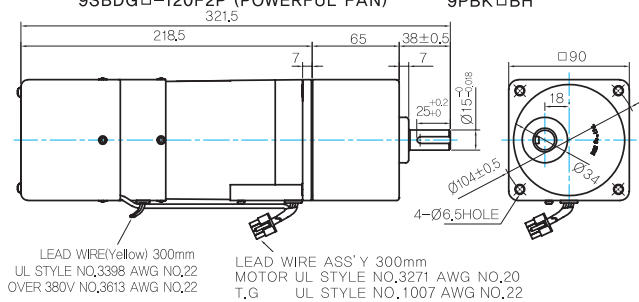
- MODEL: 9XD10□□



## GEARED MOTOR

### P TYPE GEARBOX

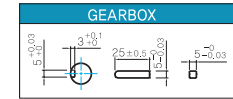
- MOTOR MODEL:  
9SBDG□-120F2P (POWERFUL FAN)
- GEARBOX MODEL:  
9PBK□BH
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

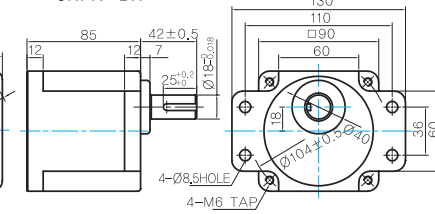
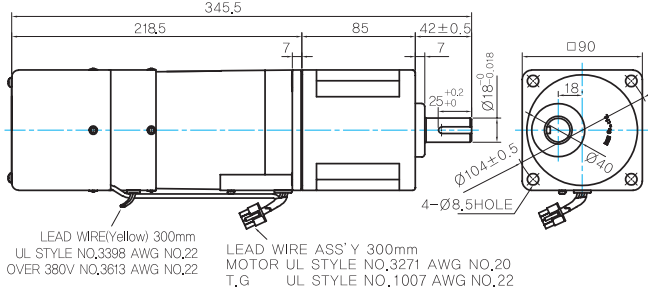
MODEL	SPEC
KEY TYPE 9PBK□BH 9PFK□BH	

### KEY SPEC



### H TYPE GEARBOX

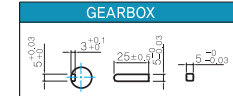
- MOTOR MODEL:  
9SBDG□-120F2H (POWERFUL FAN)
- GEARBOX MODEL:  
9HBK□BH
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

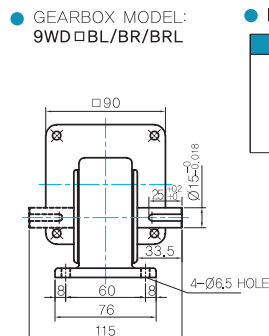
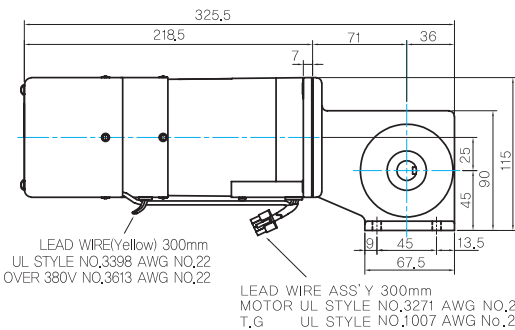
MODEL	SPEC
KEY TYPE 9HBK□BH 9HFK□BH	

### KEY SPEC

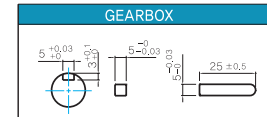


### W TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-120F2W (POWERFUL FAN)
- GEARBOX MODEL:  
9WD□BL/BR/BRL



### KEY SPEC

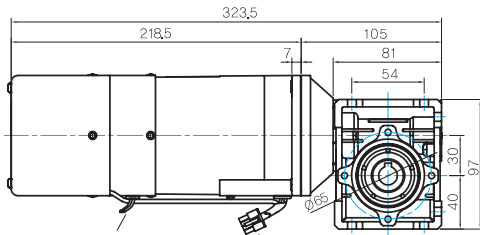


# B AC Motors

## S.C. Brake Motor 120W (□ 90mm)

### WH TYPE GEARBOX

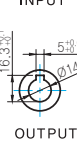
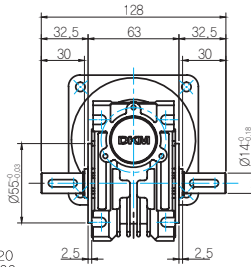
● MOTOR MODEL:  
9SBDG□-120F2WH (POWERFUL FAN)



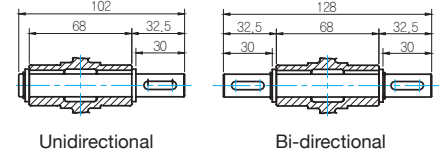
LEAD WIRE(Yellow) 300mm  
UL STYLE NO.3398 AWG NO.22  
OVER 380V NO.3613 AWG NO.22

LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

● GEARBOX MODEL:  
9WHD□-030



● SHAFT

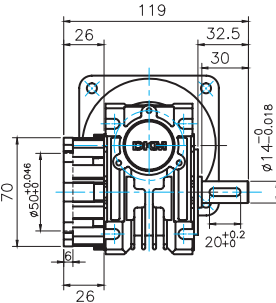
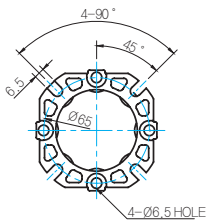


### WEIGHT

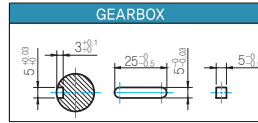
PART	WEIGHT(Kg)	
MOTOR	3.7	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9HB(F)K3BH - 9HB(F)K10BH	1.62
	9HB(F)K12.5BH - 9HB(F)K20BH	1.68
	9HB(F)K25BH - 9HB(F)K60BH	1.73
	9HB(F)K75BH - 9HB(F)K200BH	1.78
	9WD□BL/BR/BRL	1.0
	9WHD□-030	1.2
9XD10□	0.6	

\* The output flange and shaft are sold separately

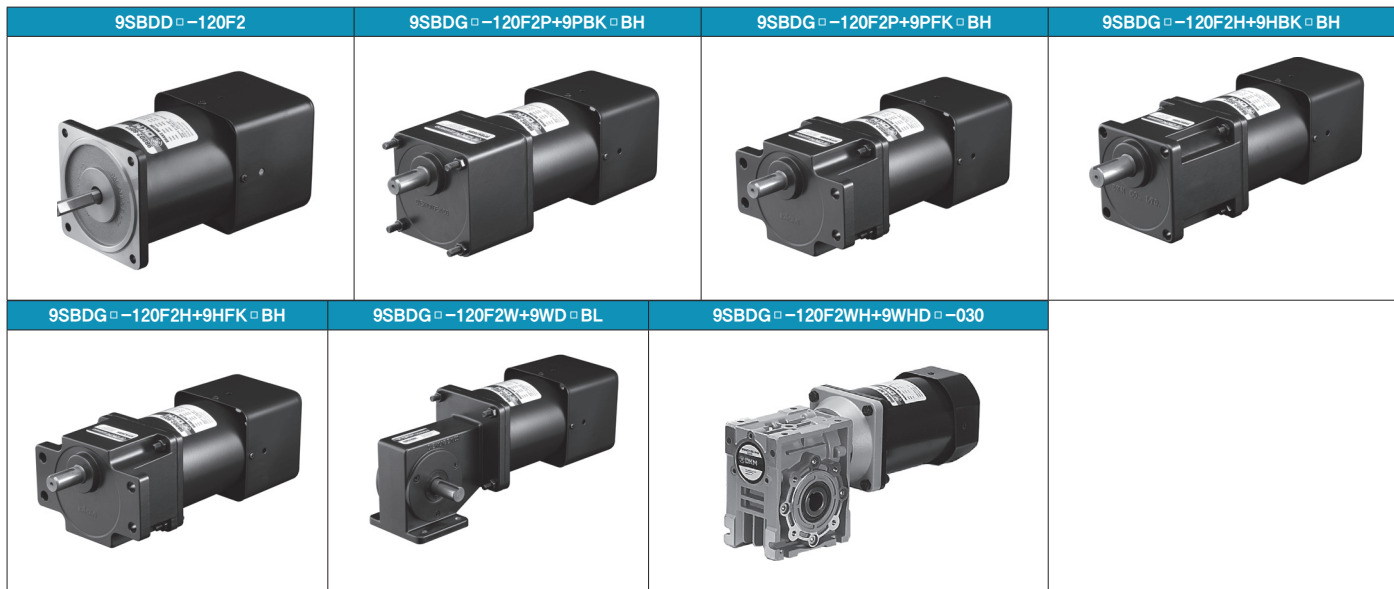
● FLANGE



● KEY SPEC



### Motor Images



# 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	
9SBDG1(A)-180F2□	180	1φ110	60	4	30min.	90-1700	6.40	0.640	10.00	1.000	3.00	0.300	30.0 / 250
9SBDG2(D)-180F2□	180	1φ220	60	4	30min.	90-1700	6.40	0.640	10.00	1.000	3.00	0.300	8.0 / 450
9SBDGE-180F2□	180	1φ220	50	4	30min.	90-1400	6.40	0.640	10.00	1.000	3.00	0.300	8.0 / 450
		1φ240					7.00	0.700	11.00	1.100	3.30	0.330	

- 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) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching a gearbox and D-Cut Type Shaft is for using the 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	10	12.5	15	18	20	25
9SBDG*-180F2H	9HBK□BH	1200	110	60	kgfcm	24.3	29.2	40.5	48.6	60.8	72.9	81.0	91.3	109.5	131.4	146.0	165.0
					N.m	2.38	2.86	3.97	4.76	5.95	7.14	7.94	8.94	10.73	12.88	14.31	16.17
			220	60	kgfcm	24.3	29.2	40.5	48.6	60.8	72.9	81.0	91.3	109.5	131.4	146.0	165.0
					N.m	2.38	2.86	3.97	4.76	5.95	7.14	7.94	8.94	10.73	12.88	14.31	16.17
	9HFK□BH	90	110	60	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5
					N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85
			220	60	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5
					N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85
9HFK□BH	90	220	60	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	
				N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	
		220/240	50	kgfcm	7.3	8.7	12.2	14.6	18.2	21.9	24.3	27.4	32.9	39.4	43.8	49.5	
				N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.68	3.22	3.86	4.29	4.85	

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	30	36	40	50	60	75	90	100	120	150	180	200	
9SBDG*-180F2H	9HBK□BH	1200	110	60	kgfcm	198.0	237.6	264.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	
					N.m	19.40	23.28	25.87	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	
			220	60	kgfcm	198.0	237.6	264.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	19.40	23.28	25.87	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	
			220/240	50	kgfcm	198.0	237.6	264.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	
					N.m	19.40	23.28	25.87	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	
	9HFK□BH	90	110	60	kgfcm	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0	
					N.m	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40	
			220	60	kgfcm	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0	
					N.m	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40	
			220/240	50	kgfcm	59.4	71.3	79.2	99.0	118.8	132.8	159.3	177.0	212.4	265.5	300.0	300.0	
					N.m	5.82	6.99	7.76	9.70	11.64	13.01	15.61	17.35	20.82	26.02	29.40	29.40	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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 180W (□90mm)

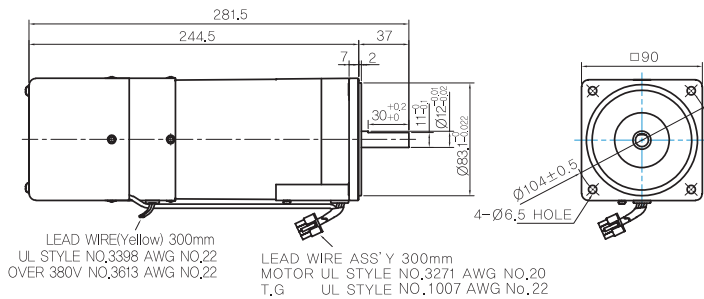
### Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	5	7.5	10	15	20	25	30	40	50	60	80	100	
9SBDG* -180F2WH	9WHD □ -030	1200	110	60	kgfcm N.m	34.8 3.41	50.4 4.94	64.8 6.35	91.2 8.94	115.2 11.29	132.0 12.94	153.6 15.05	183.7 18.00	173.5 17.00	163.3 16.00	132.7 13.00	-	
			220	60	kgfcm N.m	34.8 3.41	50.4 4.94	64.8 6.35	91.2 8.94	115.2 11.29	132.0 12.94	153.6 15.05	183.7 18.00	173.5 17.00	163.3 16.00	132.7 13.00	-	
			220/240	50	kgfcm N.m	34.8 3.41	50.4 4.94	64.8 6.35	91.2 8.94	115.2 11.29	132.0 12.94	153.6 15.05	183.7 18.00	173.5 17.00	163.3 16.00	132.7 13.00	-	
		90	110	60	kgfcm N.m	10.4 1.02	15.1 1.48	19.4 1.91	27.4 2.68	34.6 3.39	39.6 3.88	46.1 4.52	56.6 5.55	64.8 6.35	72.0 7.06	84.5 8.28	-	
			220	60	kgfcm N.m	10.4 1.02	15.1 1.48	19.4 1.91	27.4 2.68	34.6 3.39	39.6 3.88	46.1 4.52	56.6 5.55	64.8 6.35	72.0 7.06	84.5 8.28	-	
			220/240	50	kgfcm N.m	10.4 1.02	15.1 1.48	19.4 1.91	27.4 2.68	34.6 3.39	39.6 3.88	46.1 4.52	56.6 5.55	64.8 6.35	72.0 7.06	84.5 8.28	-	
9SBDG* -180F2WH	9WHD □ -040	1200	110	60	kgfcm N.m	-	-	-	-	-	-	-	-	244.0 23.91	273.6 26.81	295.0 28.91	270.0 26.46	
			220	60	kgfcm N.m	-	-	-	-	-	-	-	-	-	244.0 23.91	273.6 26.81	295.0 28.91	270.0 26.46
			220/240	50	kgfcm N.m	-	-	-	-	-	-	-	-	-	244.0 23.91	273.6 26.81	295.0 28.91	270.0 26.46
		90	110	60	kgfcm N.m	-	-	-	-	-	-	-	-	-	73.2 7.17	82.1 8.04	97.9 9.60	112.8 11.05
			220	60	kgfcm N.m	-	-	-	-	-	-	-	-	-	73.2 7.17	82.1 8.04	97.9 9.60	112.8 11.05
			220/240	50	kgfcm N.m	-	-	-	-	-	-	-	-	-	73.2 7.17	82.1 8.04	97.9 9.60	112.8 11.05

### Dimensions

#### MOTOR ONLY

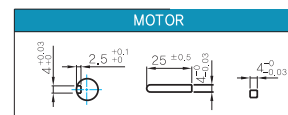
- MOTOR MODEL:  
9SBDD□-180F2 (POWERFUL FAN)



#### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	
9SBDD□-180F2	
KEY TYPE	
9SBDK□-180F2	

#### KEY SPEC

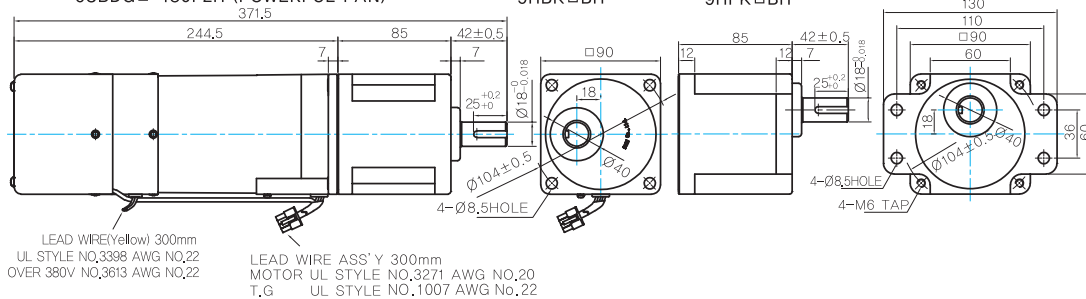


#### GEARED MOTOR

#### H TYPE GEARBOX

- MOTOR MODEL:  
9SBDG□-180F2H (POWERFUL FAN)

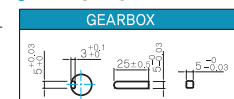
- GEARBOX MODEL:  
9HBK□BH
- GEARBOX MODEL:  
9HFK□BH



#### GEARBOX OUTPUT SHAFT

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

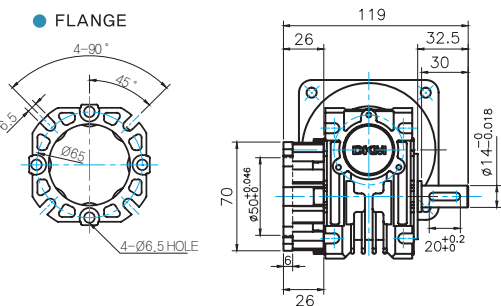
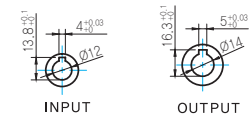
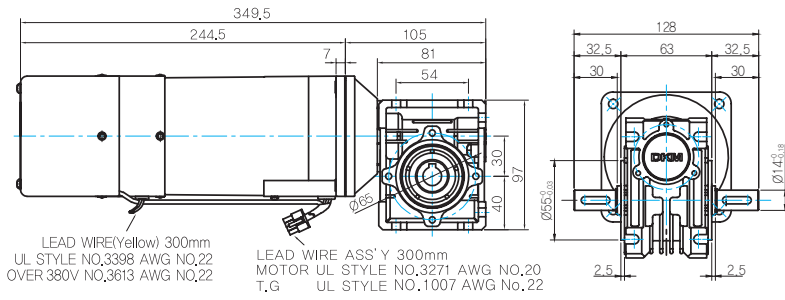
#### KEY SPEC



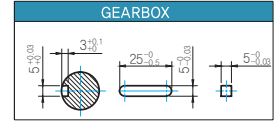
### WH TYPE GEARBOX

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

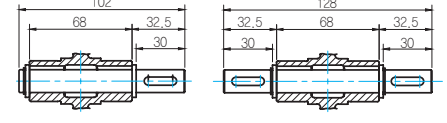
● GEARBOX MODEL:  
9WHD□-030



● KEY SPEC



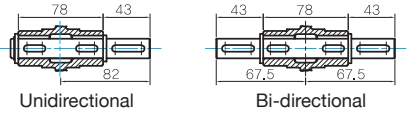
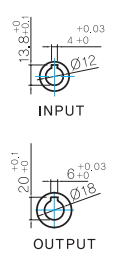
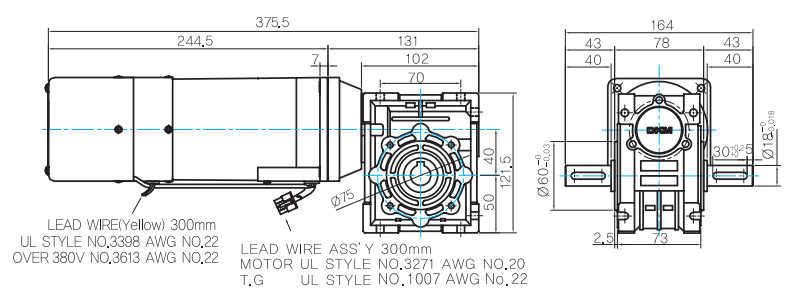
● SHAFT



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

● GEARBOX MODEL:  
9WHD□-040

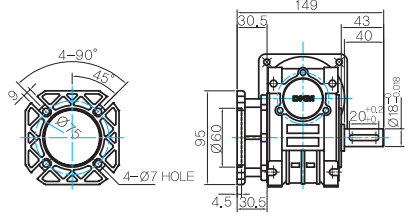
● SHAFT



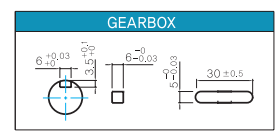
● WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4.50	
GEAR BOX	9HB(F)K3BH - 9HB(F)K10BH	1.62
	9HB(F)K12.5BH - 9HB(F)K20BH	1.68
	9HB(F)K25BH - 9HB(F)K60BH	1.73
	9HB(F)K75BH - 9HB(F)K200BH	1.78
	9WHD□-030	1.2
9WHD□-040	2.1	
9XD10□	0.6	

● FLANGE



● KEY SPEC



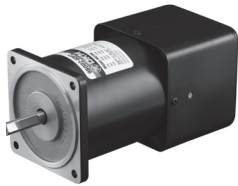



\* The output flange and shaft are sold separately



# B AC Motors

S.C. Brake Motor 180W (□ 90mm)

## Motor Images

9SBDD □ -180F2	9SBDG □ -180F2H+9HBK □ BH	9SBDG □ -180F2H+9HFK □ BH	9SBDG □ -180F2WH+9WHD □ -030
			



# Speed Control Clutch & Brake Motor



S.C. Clutch & Brake Motor

## Index

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# B AC Motors

S.C. C&B Motor 15W (□ 80mm)

## 15W Speed Control Clutch & Brake Motor 15W(□ 80mm)

### Motor Specification

Model 8CSDG*-15G: Gear 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
8CSDG1(A)-15G	15	1 ∅110	60	4	Cont.	90-1700	0.70	0.070	1.50	0.150	0.45	0.045	3.5 / 250
8CSDG2(D)-15G	15	1 ∅220	60	4	Cont.	90-1700	0.70	0.070	1.50	0.150	0.45	0.045	1.2 / 450
8CSDGE-15G	15	1 ∅220	50	4	Cont.	90-1400	0.65	0.065	1.20	0.120	0.43	0.043	1.2 / 450
		0.70					0.070	1.40	0.140	0.45	0.045		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
8CSDG*-15G	8GBK □ BMH	1200	110	60	kgfcm	3.6	4.4	6.1	7.3	9.1	10.9	12.2	15.2	18.2	21.9	21.9	27.4	32.9
					N.m	0.36	0.43	0.60	0.71	0.89	1.07	1.19	1.49	1.79	2.14	2.15	2.68	3.22
			220	60	kgfcm	3.6	4.4	6.1	7.3	9.1	10.9	12.2	15.2	18.2	21.9	21.9	27.4	32.9
		N.m	0.36	0.43	0.60	0.71	0.89	1.07	1.19	1.49	1.79	2.14	2.15	2.68	3.22			
		220/240	50	kgfcm	3.4	4.1	5.7	6.8	8.5	10.2	11.3	14.2	17.0	20.4	20.4	25.6	30.7	
		N.m	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.39	1.67	2.00	2.00	2.50	3.00			
90	60	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2	9.9			
		N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80	0.97			
		220	60	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2	9.9	
N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80	0.97					
220/240	50	kgfcm	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.6	5.5	6.6	6.6	8.2	9.9			
N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.64	0.80	0.97					

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200	250	300	360	
8CSDG*-15G	8GBK □ BMH	1200	110	60	kgfcm	39.4	43.8	49.5	59.4	74.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	
					N.m	3.86	4.29	4.85	5.82	7.28	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
			220	60	kgfcm	39.4	43.8	49.5	59.4	74.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	3.86	4.29	4.85	5.82	7.28	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	
		220/240	50	kgfcm	36.8	40.9	46.2	55.4	69.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
		N.m	3.61	4.01	4.53	5.43	6.79	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	60	kgfcm	11.8	13.1	14.9	17.8	22.3	26.7	29.7	35.6	44.6	53.5	59.4	74.3	80.0	80.0				
		N.m	1.16	1.29	1.46	1.75	2.18	2.62	2.91	3.49	4.37	5.24	5.82	7.28	7.84	7.84				
		220	60	kgfcm	11.8	13.1	14.9	17.8	22.3	26.7	29.7	35.6	44.6	53.5	59.4	74.3	80.0	80.0		
N.m	1.16	1.29	1.46	1.75	2.18	2.62	2.91	3.49	4.37	5.24	5.82	7.28	7.84	7.84						
220/240	50	kgfcm	11.8	13.1	14.9	17.8	22.3	26.7	29.7	35.6	44.6	53.5	59.4	74.3	80.0	80.0				
N.m	1.16	1.29	1.46	1.75	2.18	2.62	2.91	3.49	4.37	5.24	5.82	7.28	7.84	7.84						

- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

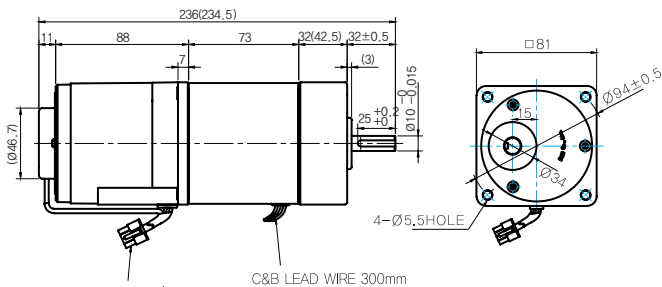
## Dimensions

### GEARED MOTOR

#### G TYPE GEARBOX

- MOTOR MODEL:  
8CSDG□-15G

- GEARBOX MODEL:  
8GBK□BMH



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### 32(42.5)-Table1

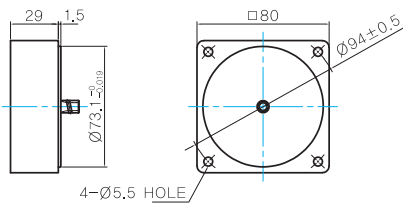
SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

#### KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

- MODEL: 8XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2.83	
GEAR BOX	8GBK3BMH - 8GBK18BMH	0.56
	8GBK20BMH - 8GBK40BMH	0.65
	8GBK50BMH - 8GBK360BMH	0.72
8XD10□□	0.45	

## Motor Images

8CSDG□-15G+8GBK□BMH



# B AC Motors

S.C. C&B Motor 25W (□ 80mm)

## 25W Speed Control Clutch & Brake Motor 25W(□ 80mm)

### Motor Specification

Model 8CSDG*-25G: Gear 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
8CSDG1(A)-25G	25	1 φ 110	60	4	Cont.	90-1700	1.00	0.100	1.70	0.170	0.60	0.060	6.0 / 250
8CSDG2(D)-25G	25	1 φ 220	60	4	Cont.	90-1700	1.00	0.100	1.80	0.180	0.60	0.060	1.5 / 450
8CSDGE-25G	25	1 φ 220	50	4	Cont.	90-1400	0.80	0.080	1.50	0.150	0.50	0.050	1.5 / 450
		1 φ 240					1.00	0.100	1.80	0.180	0.52	0.052	

1) Enter the phase & voltage code in the place \* within the motor model name.

2) The phase & voltage code A, D, E contain a built-in thermal protector.

3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	
8CSDG*-25G	8GBK □ BMH	1200	110	60	kgfcm	4.1	5.0	6.9	8.3	10.3	12.4	13.8	17.2	20.7	24.8	24.8	31.0	37.2	
					N.m	0.40	0.49	0.67	0.81	1.01	1.21	1.35	1.69	2.02	2.43	2.43	3.04	3.65	
			220	60	kgfcm	4.4	5.2	7.3	8.7	10.9	13.1	14.6	18.2	21.9	26.2	26.2	26.3	32.9	39.4
					N.m	0.43	0.51	0.71	0.86	1.07	1.29	1.43	1.79	2.14	2.57	2.57	3.22	3.86	
			220/240	50	kgfcm	4.4	5.2	7.3	8.7	10.9	13.1	14.6	18.2	21.9	26.2	26.2	26.3	32.9	39.4
					N.m	0.43	0.51	0.71	0.86	1.07	1.29	1.43	1.79	2.14	2.57	2.57	3.22	3.86	
		90	110	60	kgfcm	1.5	1.7	2.4	2.9	3.6	4.4	4.9	6.1	7.3	8.7	8.8	11.0	13.1	
					N.m	0.14	0.17	0.24	0.29	0.36	0.43	0.48	0.60	0.71	0.86	0.86	1.07	1.29	
			220	60	kgfcm	1.5	1.7	2.4	2.9	3.6	4.4	4.9	6.1	7.3	8.7	8.8	11.0	13.1	
					N.m	0.14	0.17	0.24	0.29	0.36	0.43	0.48	0.60	0.71	0.86	0.86	1.07	1.29	
			220/240	50	kgfcm	1.3	1.5	2.1	2.5	3.2	3.8	4.2	5.3	6.3	7.6	7.6	9.5	11.4	
					N.m	0.12	0.15	0.21	0.25	0.31	0.37	0.41	0.52	0.62	0.74	0.74	0.93	1.12	

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	36	40	50	60	75	90	100	120	150	180	200	250	300	360		
8CSDG*-25G	8GBK □ BMH	1200	110	60	kgfcm	44.7	49.6	56.1	67.3	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0		
					N.m	4.38	4.86	5.50	6.60	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	
			220	60	kgfcm	47.3	52.6	59.4	71.3	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	4.64	5.15	5.82	6.99	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
			220/240	50	kgfcm	47.3	52.6	59.4	71.3	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	4.64	5.15	5.82	6.99	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	15.8	17.5	19.8	23.8	29.7	35.6	39.6	47.5	59.4	71.3	79.2	80.0	80.0	80.0		
					N.m	1.55	1.72	1.94	2.33	2.91	3.49	3.88	4.66	5.82	6.99	7.76	7.84	7.84	7.84		
			220	60	kgfcm	15.8	17.5	19.8	23.8	29.7	35.6	39.6	47.5	59.4	71.3	79.2	80.0	80.0	80.0		
					N.m	1.55	1.72	1.94	2.33	2.91	3.49	3.88	4.66	5.82	6.99	7.76	7.84	7.84	7.84		
			220/240	50	kgfcm	13.7	15.2	17.2	20.6	25.7	30.9	34.3	41.2	51.5	61.8	68.6	80.0	80.0	80.0		
					N.m	1.34	1.49	1.68	2.02	2.52	3.03	3.36	4.04	5.05	6.05	6.73	7.84	7.84	7.84		

1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.

3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the 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.

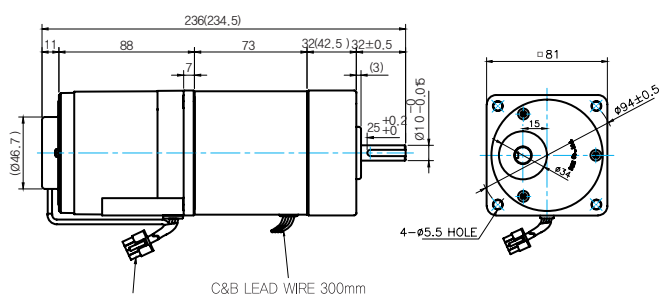
## Dimensions

### GEARED MOTOR

#### G TYPE GEARBOX

● MOTOR MODEL:  
8CSDG□-25G-C

● GEARBOX MODEL:  
8GBK□BMH



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,20  
T,G UL STYLE NO,1430 AWG No,24

#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### 32(42.5)-Table1

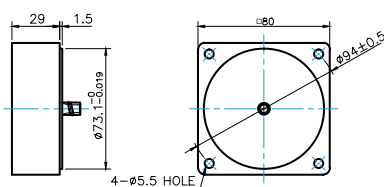
SIZE(mm)	GEAR RATIO
32	8GBK3BMH - 8GBK18BMH
42.5	8GBK20BMH - 8GBK360BMH

#### KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

● MODEL:  
8XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	2,73	
GEAR BOX	8GBK3BMH - 8GBK18BMH	0,56
	8GBK20BMH - 8GBK40BMH	0,65
	8GBK50BMH - 8GBK360BMH	0,72
	8XD10□□	0,45

## Motor Images

8CSDG□-25G+8GBK□BMH



# B AC Motors

S.C. C&B Motor 40W (□ 90mm)

## 40W Speed Control Clutch & Brake Motor 40W(□ 90mm)

### Motor Specification

Model 9CSDG*-40G: Gear 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
9CSDG1(A)-40 □	40	1 ∅110	60	4	Cont.	90-1700	1.80	0.180	2.70	0.270	0.80	0.080	10.0 / 250
9CSDG2(D)-40 □	40	1 ∅220	60	4	Cont.	90-1700	1.80	0.180	2.70	0.270	0.80	0.080	2.5 / 450
9CSDGE-40 □	40	1 ∅220	50	4	Cont.	90-1400	1.50	0.150	2.50	0.250	0.70	0.070	2.5 / 450
		1 ∅240					1.80	0.180	3.00	0.300	0.72	0.072	

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
9CSDG* 40G	9GBK □ BMH	1200	110	60	kgfcm	4.4	6.6	7.9	10.9	13.1	16.4	19.7	21.9	27.3	32.8	39.4	39.4	49.3	59.1	71.0	78.8	89.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
					N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.68	3.21	3.86	3.86	4.83	5.79	6.95	7.73	8.73	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80
					kgfcm	4.4	6.6	7.9	10.9	13.1	16.4	19.7	21.9	27.3	32.8	39.4	39.4	49.3	59.1	71.0	78.8	89.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.68	3.21	3.86	3.86	4.83	5.79	6.95	7.73	8.73	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	4.1	6.1	7.3	10.1	12.2	15.2	18.2	20.3	25.3	30.4	36.5	36.5	45.6	54.8	65.7	73.0	82.5	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
		N.m	0.40	0.60	0.71	0.99	1.19	1.49	1.79	1.98	2.48	2.98	3.57	3.58	4.47	5.37	6.44	7.15	8.09	9.70	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	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.4	26.4	31.7	39.6	47.5	52.8	63.4	79.2	95.0	100.0				
				N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.72	2.06	2.29	2.59	3.10	3.88	4.66	5.17	6.21	7.76	9.31	9.80				
				kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.4	26.4	31.7	39.6	47.5	52.8	63.4	79.2	95.0	100.0				
		N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.72	2.06	2.29	2.59	3.10	3.88	4.66	5.17	6.21	7.76	9.31	9.80						
		kgfcm	1.1	1.7	2.0	2.8	3.4	4.3	5.1	5.7	7.1	8.5	10.2	10.2	12.8	15.3	18.4	20.4	23.1	27.7	34.7	41.6	46.2	55.4	69.3	83.2	92.4						
		N.m	0.11	0.17	0.20	0.28	0.33	0.42	0.50	0.56	0.69	0.83	1.00	1.00	1.25	1.50	1.80	2.00	2.26	2.72	3.40	4.07	4.53	5.43	6.79	8.15	9.06						

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
9CSDG* 40P	9PBK □ BH	1200	110	60	kgfcm	4.4	6.6	7.9	10.9	13.1	16.4	19.7	21.9	24.6	29.6	35.5	39.4	44.6	53.5	64.2	71.3	89.1	106.9	119.5	143.4	159.3	191.2	200.0	200.0	200.0			
					N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.41	2.90	3.48	3.86	4.37	5.24	6.29	6.99	8.73	10.48	11.71	14.05	15.61	18.73	19.60	19.60	19.60			
					kgfcm	4.4	6.6	7.9	10.9	13.1	16.4	19.7	21.9	24.6	29.6	35.5	39.4	44.6	53.5	64.2	71.3	89.1	106.9	119.5	143.4	159.3	191.2	200.0	200.0	200.0			
		N.m	0.43	0.64	0.77	1.07	1.29	1.61	1.93	2.14	2.41	2.90	3.48	3.86	4.37	5.24	6.29	6.99	8.73	10.48	11.71	14.05	15.61	18.73	19.60	19.60	19.60						
		kgfcm	4.1	6.1	7.3	10.1	12.2	15.2	18.2	20.3	22.8	27.4	32.9	36.5	41.3	49.5	59.4	66.0	82.5	99.0	110.6	132.8	147.5	177.0	200.0	200.0	200.0						
		N.m	0.40	0.60	0.71	0.99	1.19	1.49	1.79	1.98	2.24	2.68	3.22	3.58	4.04	4.85	5.82	6.47	8.09	9.70	10.84	13.01	14.46	17.35	19.60	19.60	19.60						
	90	110	60	kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	7.3	8.8	10.5	11.7	13.2	15.8	19.0	21.1	26.4	31.7	35.4	42.5	47.2	56.6	70.8	85.0	94.4				
				N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.72	0.86	1.03	1.14	1.29	1.55	1.86	2.07	2.59	3.10	3.47	4.16	4.63	5.55	6.94	8.33	9.25				
				kgfcm	1.3	1.9	2.3	3.2	3.9	4.9	5.8	6.5	7.3	8.8	10.5	11.7	13.2	15.8	19.0	21.1	26.4	31.7	35.4	42.5	47.2	56.6	70.8	85.0	94.4				
		N.m	0.13	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.72	0.86	1.03	1.14	1.29	1.55	1.86	2.07	2.59	3.10	3.47	4.16	4.63	5.55	6.94	8.33	9.25						
		kgfcm	1.1	1.7	2.0	2.8	3.4	4.3	5.1	5.7	6.4	7.7	9.2	10.2	11.6	13.9	16.6	18.5	23.1	27.7	31.0	37.2	41.3	49.6	62.0	74.3	82.6						
		N.m	0.11	0.17	0.20	0.28	0.33	0.42	0.50	0.56	0.63	0.75	0.90	1.00	1.13	1.36	1.63	1.81	2.26	2.72	3.04	3.64	4.05	4.86	6.07	7.29	8.09						

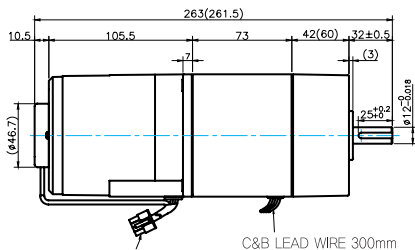
- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the rotation in the 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

### GEARED MOTOR

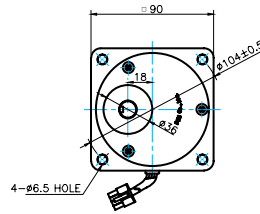
#### G TYPE GEARBOX

- MOTOR MODEL:  
9CSDG□-40G-C



LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1430 AWG No.24

- GEARBOX MODEL:  
9GBK□BMH



#### GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	

#### 42(60)-Table1

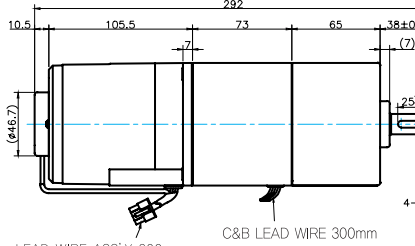
SIZE(mm)	GEAR RATIO
42	9GBK2BMH ~ 9GBK18BMH
60	9GBK20BMH ~ 9GBK200BMH

#### KEY SPEC

GEARBOX	

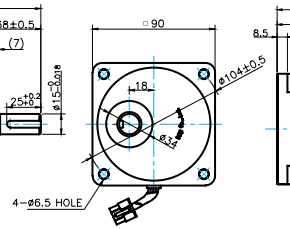
#### P TYPE GEARBOX

- MOTOR MODEL:  
9CSDG□-40P-C

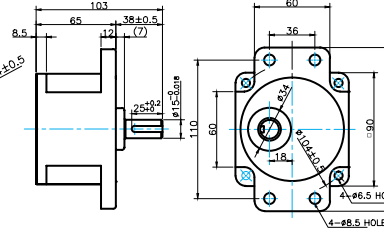


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1430 AWG No.24

- GEARBOX MODEL:  
9PBK□BH



- GEARBOX MODEL:  
9PFK□BH



#### GEARBOX OUTPUT SHAFT

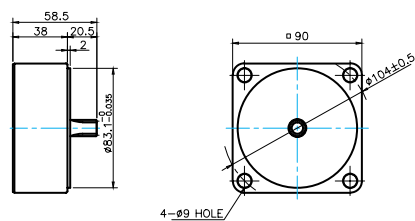
MODEL	SPEC
KEY TYPE	
9PBK□BH 9PFK□BH	

#### KEY SPEC

GEARBOX	

#### INTER-DECIMAL GEARBOX

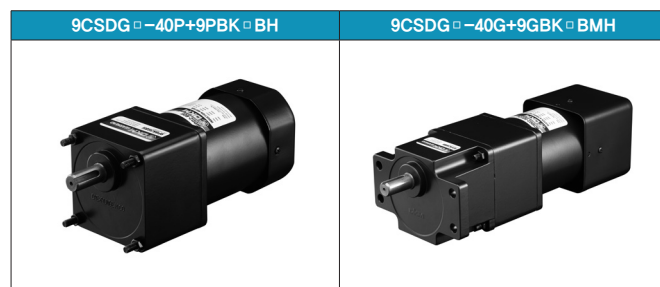
- MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	3,9	
GEAR BOX	9GBK2BMH ~ 9GBK18BMH	0,78
	9GBK20BMH ~ 9GBK40BMH	1,1
	9GBK50BMH ~ 9GBK200BMH	1,2
	9PB(F)K2BH ~ 9PB(F)K10BH	1,28
	9PB(F)K12.5BH ~ 9PB(F)K20BH	1,3
	9PB(F)K25BH ~ 9PB(F)K60BH	1,45
	9PB(F)K75BH ~ 9PB(F)K200BH	1,47
	9XD10□□	0,6

## Motor Images





# B AC Motors

S.C. C&B Motor 60W (□ 90mm)

## 60W Speed Control Clutch & Brake Motor 60W(□ 90mm)

### Motor Specification

Model 9CSDG*-60F2P: Gear 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
9CSDG1(A)-60F2P	60	1∅110	60	4	Cont.	90-1700	4.00	0.400	5.50	0.550	1.60	0.160	16.0 / 250
9CSDG2(D)-60F2P	60	1∅220	60	4	Cont.	90-1700	4.00	0.400	5.50	0.550	1.60	0.160	5.0 / 450
9CSDGE-60F2P	60	1∅220	50	4	Cont.	90-1400	4.00	0.400	5.20	0.520	1.40	0.140	5.0 / 450
		4.50					0.450	5.80	0.580	1.60	0.160		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200			
9CSDG*-60F2P	9PBK □BH	1200	110	60	kgfcm N.m	8.9	13.4	16.0	22.3	26.7	33.4	40.1	44.6	50.2	60.2	72.3	80.3	90.8	108.9	130.7	145.2	181.5	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
						0.87	1.31	1.57	2.18	2.62	3.27	3.93	4.37	4.92	5.90	7.08	7.87	8.89	10.67	12.81	14.23	17.79	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 N.m	8.4	12.6	15.2	21.1	25.3	31.6	37.9	42.1	47.5	56.9	68.3	75.9	85.8	103.0	123.6	137.3	171.6	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
					0.83	1.24	1.49	2.06	2.48	3.10	3.71	4.13	4.65	5.58	6.70	7.44	8.41	10.09	12.11	13.45	16.82	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	90	110	60	kgfcm N.m	2.6	3.9	4.7	6.5	7.8	9.7	11.7	13.0	14.6	17.5	21.0	23.4	26.4	31.7	38.0	42.2	52.8	63.4	70.8	85.0	94.4	113.3	141.6	169.9	188.8	188.8	188.8
							0.25	0.38	0.46	0.64	0.76	0.95	1.14	1.27	1.43	1.72	2.06	2.29	2.59	3.10	3.73	4.14	5.17	6.21	6.94	8.33	9.25	11.10	13.88	16.65	18.50	18.50	18.50
	220/240		50	kgfcm N.m	2.3	3.4	4.1	5.7	6.8	8.5	10.2	11.3	12.8	15.3	18.4	20.4	23.1	27.7	33.3	37.0	46.2	55.4	62.0	74.3	82.6	99.1	123.9	148.7	165.2	165.2	165.2		
					0.22	0.33	0.40	0.56	0.67	0.83	1.00	1.11	1.25	1.50	1.80	2.00	2.26	2.72	3.26	3.62	4.53	5.43	6.07	7.29	8.09	9.71	12.14	14.57	16.19	16.19	16.19	16.19	

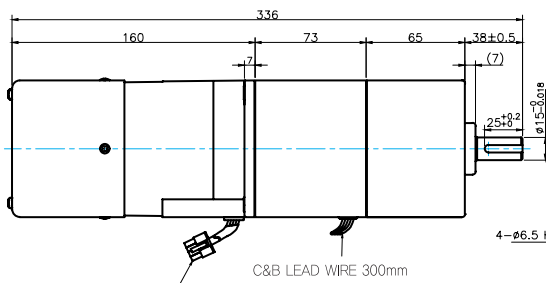
- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the rotation in the 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

### GEARED MOTOR

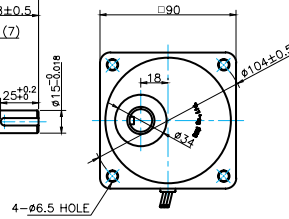
#### P TYPE GEARBOX

- MOTOR MODEL:  
9CSDG□-60F2P-C



C&B LEAD WIRE 300mm  
LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1430 AWG No.24

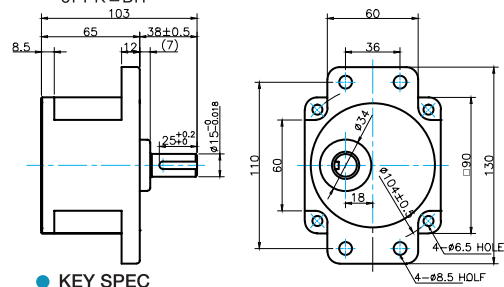
- GEARBOX MODEL:  
9PBK□BH



- GEARBOX OUTPUT SHAFT

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

- GEARBOX MODEL:  
9PFK□BH

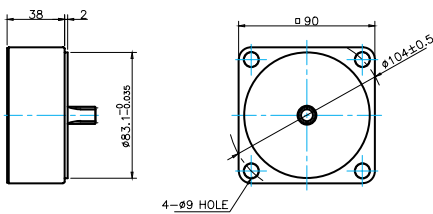


- KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

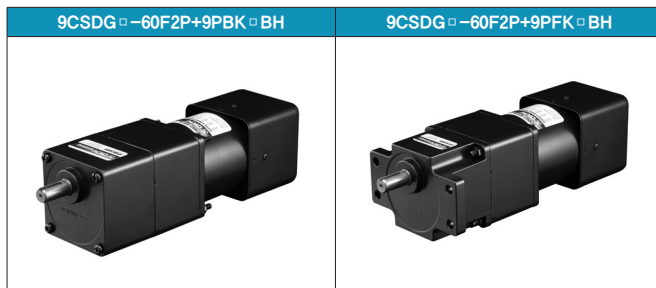
- MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4,50	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12.5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9XD10□□	0,6

## Motor Images



# B AC Motors

S.C. C&B Motor 90W (□ 90mm)

## 90W Speed Control Clutch & Brake Motor 90W(□ 90mm)

### Motor Specification

Model 9CSDG*-90F2P: Gear 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
9CSDG1(A)-90F2P	90	1 ∅ 110	60	4	Cont.	90-1700	4.50	0.450	6.30	0.630	2.30	0.230	20.0 / 250
9CSDG2(D)-90F2P	90	1 ∅ 220	60	4	Cont.	90-1700	4.50	0.450	6.30	0.630	2.30	0.230	6.0 / 450
9CSDGE-90F2P	90	1 ∅ 220	50	4	Cont.	90-1400	4.50	0.450	5.40	0.540	2.20	0.220	6.0 / 450
		5.00					0.500	6.10	0.610	2.30	0.230		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
9CSDG*-90F2P	9PBK □ BH	1200	110	60	kgfcm	10.2	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0	124.7	149.7	166.3	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
					N.m	1.00	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19	12.22	14.67	16.30	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		9PFK □ BH	90	110	60	kgfcm	10.2	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0	124.7	149.7	166.3	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
						N.m	1.00	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19	12.22	14.67	16.30	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		90	220/240	50	kgfcm	8.7	13.1	15.7	21.9	26.2	32.8	39.4	43.7	49.3	59.1	71.0	78.8	89.1	106.9	128.3	142.6	178.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
					N.m	0.86	1.29	1.54	2.14	2.57	3.21	3.86	4.29	4.83	5.79	6.95	7.73	8.73	10.48	12.57	13.97	17.46	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
	90	220/240	50	kgfcm	3.7	5.6	6.7	9.3	11.2	14.0	16.8	18.6	21.0	25.2	30.2	33.6	38.0	45.5	54.6	60.7	75.9	91.1	101.8	122.1	135.7	162.8	200.0	200.0	200.0	200.0	200.0	
				N.m	0.37	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.06	2.47	2.96	3.29	3.72	4.46	5.36	5.95	7.44	8.93	9.97	11.97	13.30	15.96	19.60	19.60	19.60	19.60	19.60	19.60
	90	220/240	50	kgfcm	3.6	5.3	6.4	8.9	10.7	13.4	16.0	17.8	20.1	24.1	28.9	32.1	36.3	43.6	52.3	58.1	72.6	87.1	97.4	116.8	129.8	155.8	194.7	200.0	200.0	200.0	200.0	
				N.m	0.35	0.52	0.63	0.87	1.05	1.31	1.57	1.75	1.97	2.36	2.83	3.15	3.56	4.27	5.12	5.69	7.11	8.54	9.54	11.45	12.72	15.26	19.08	19.60	19.60	19.60	19.60	

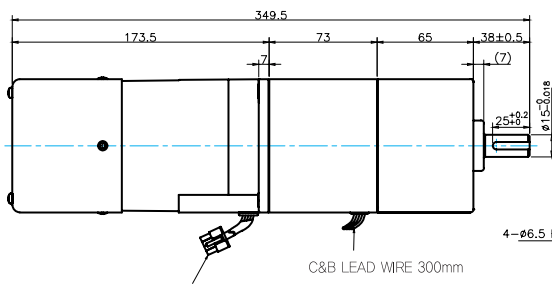
- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the rotation in the 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

### GEARED MOTOR

#### P TYPE GEARBOX

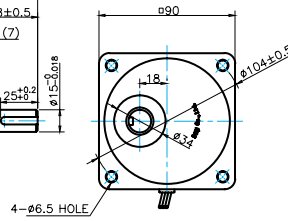
● MOTOR MODEL:  
9CSDG□-90F2P-C



LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO,3271 AWG NO,20  
T,G UL STYLE NO,1430 AWG No,24

C&B LEAD WIRE 300mm

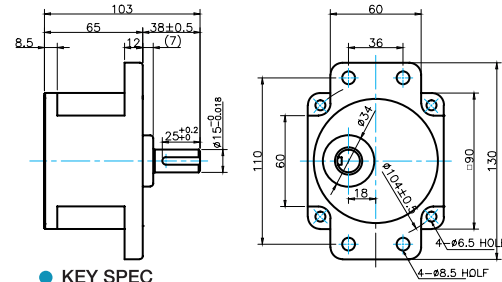
● GEARBOX MODEL:  
9PBK□BH



● GEARBOX OUTPUT SHAFT

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

● GEARBOX MODEL:  
9PFK□BH

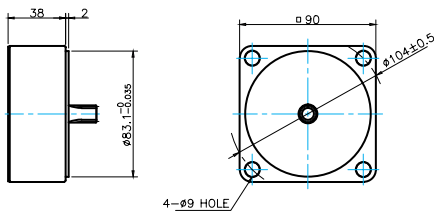


● KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

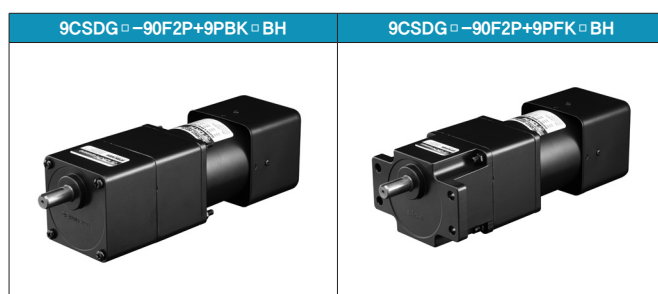
● MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4,85	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1,28
	9PB(F)K12,5BH - 9PB(F)K20BH	1,3
	9PB(F)K25BH - 9PB(F)K60BH	1,45
	9PB(F)K75BH - 9PB(F)K200BH	1,47
	9XD10□□	0,6

## Motor Images



# B AC Motors

S.C. C&B Motor 120W (□ 90mm)

## 120W Speed Control Clutch & Brake Motor 120W(□ 90mm)

### Motor Specification

Model 9CSDG*-120F2P: Gear 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		
Lead Wire Type									kgfcm	N.m	kgfcm	N.m	
9CSDG1(A)-120F2P	120	1∅110	60	4	Cont.	90-1700	5.70	0.570	8.30	0.830	2.80	0.280	25.0 / 250
9CSDG2(D)-120F2P	120	1∅220	60	4	Cont.	90-1700	5.70	0.570	8.30	0.830	2.80	0.280	6.5 / 450
9CSDGE-120F2P	120	1∅220	50	4	Cont.	90-1400	5.70	0.570	8.00	0.800	2.80	0.280	6.5 / 450
		6.20					0.620	8.60	0.860	2.90	0.290		

- 1) Enter the phase & voltage code in the place \* within the motor model name.
- 2) The phase & voltage code A, D, E contain a built-in thermal protector.
- 3) For using clutch & brake motor, the gearbox has to be attached. (Output shaft of motor: Gear Type Shaft)

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

Motor Model	Gear box Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200		
9CSDG*-120F2P	9PBK □ BH	1200	110	60	kgfcm	13.4	20.2	24.2	33.6	40.3	50.4	60.5	67.2	75.7	90.9	109.1	121.2	137.0	164.3	197.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
					N.m	1.32	1.98	2.37	3.29	3.95	4.94	5.93	6.59	7.42	8.91	10.69	11.88	13.42	16.11	19.33	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	60	kgfcm	13.4	20.2	24.2	33.6	40.3	50.4	60.5	67.2	75.7	90.9	109.1	121.2	137.0	164.3	197.2	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	1.32	1.98	2.37	3.29	3.95	4.94	5.93	6.59	7.42	8.91	10.69	11.88	13.42	16.11	19.33	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
		90	60	kgfcm	13.0	19.4	23.3	32.4	38.9	48.6	58.3	64.8	73.0	87.6	105.1	116.8	132.0	158.4	190.1	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	1.27	1.91	2.29	3.18	3.81	4.76	5.72	6.35	7.15	8.58	10.30	11.45	12.94	15.52	18.63	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	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9	46.2	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0	200.0	200.0	200.0	
					N.m	0.44	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60	19.60	19.60
		220/240	60	kgfcm	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9	46.2	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0	200.0	200.0	200.0	200.0	200.0
				N.m	0.44	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60	19.60	19.60	19.60
		90	60	kgfcm	4.5	6.8	8.2	11.3	13.6	17.0	20.4	22.7	25.6	30.7	36.8	40.9	46.2	55.4	66.5	73.9	92.4	110.9	123.9	148.7	165.2	198.2	200.0	200.0	200.0	200.0	200.0	200.0
				N.m	0.44	0.67	0.80	1.11	1.33	1.67	2.00	2.22	2.50	3.00	3.61	4.01	4.53	5.43	6.52	7.24	9.06	10.87	12.14	14.57	16.19	19.43	19.60	19.60	19.60	19.60	19.60	19.60

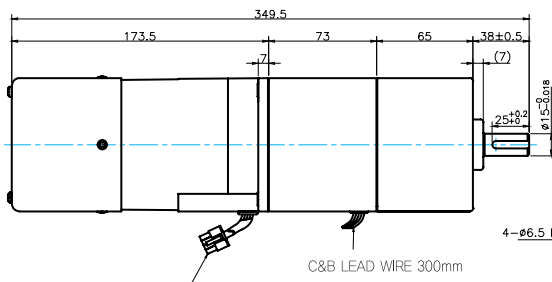
- 1) Enter the phase & voltage code in the place \* within the motor model name. 2) Enter the gear ratio in the box (□) within the gearbox model name.
- 3) A colored background indicates the gear shaft rotation in the same direction as the motor shaft; a white background indicates the rotation in the 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

### GEARED MOTOR

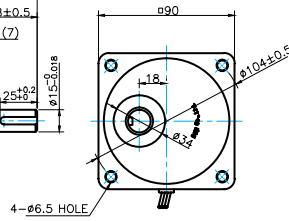
#### P TYPE GEARBOX

● MOTOR MODEL:  
9CSDG□-120F2P-C



LEAD WIRE ASS Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T.G UL STYLE NO.1430 AWG No.24

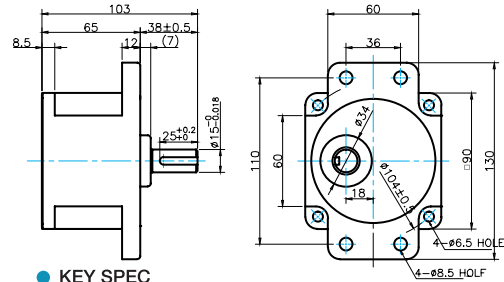
● GEARBOX MODEL:  
9PBK□BH



#### GEARBOX OUTPUT SHAFT

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

● GEARBOX MODEL:  
9PFK□BH

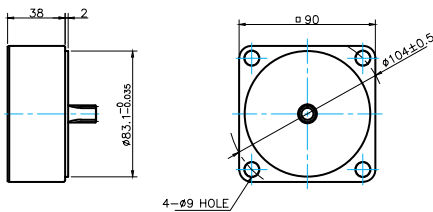


#### KEY SPEC

GEARBOX

#### INTER-DECIMAL GEARBOX

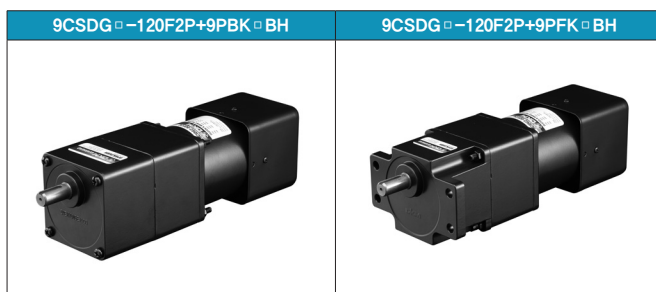
● MODEL:  
9XD10□□



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4.85	
GEAR BOX	9PB(F)K2BH - 9PB(F)K10BH	1.28
	9PB(F)K12.5BH - 9PB(F)K20BH	1.3
	9PB(F)K25BH - 9PB(F)K60BH	1.45
	9PB(F)K75BH - 9PB(F)K200BH	1.47
	9XD10□□	0.6

## Motor Images



## Wir kombinieren Elektronik und Mechanik für Sie. Und das seit über 70 Jahren.

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[www.ott-antriebe.de](http://www.ott-antriebe.de)



Kataloge entdecken