

# 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		Output Hz	At max. Output Power				Capacitor μF / VAC		
					kgfcm	N.m		Speed r/min	Torque kgfcm N.m	Current A	Input W			
9TDGA-30F2□	5min.	1φ 110	60	4	4.50	0.450	30	900	3.30	0.330	1.60	150	20.0 / 250	
	Cont.	1φ 60			1.50	0.150			12	1.30	0.130	0.90		60
9TDGD-30F2□	5min.	1φ 220	60	4	4.50	0.450	30		3.30	0.330	0.90	140	5.0 / 450	
	Cont.	1φ 140			1.50	0.150			12	1.30	0.130	0.50		50
9TDGE-30F2□	5min.	1φ 220~240	50	4	4.60	0.460	30		750	3.30	0.330	0.90	140	5.0 / 450
	Cont.	1φ 140			1.60	0.160			12	1.30	0.130	0.50	50	

- 1) Enter the phase & voltage code in the place \* and enter the model type of attaching Gearbox in the box (□) within the motor model name.  
 2) All models contain a built-in thermal protector. 3) Gear Type Shaft is for attaching Gearbox and D-Cut & Key Type Shafts are for using 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	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 N.m	5.5 0.54	8.2 0.81	9.9 0.97	13.7 1.34	16.4 1.61	20.5 2.01	24.7 2.42	30.9 3.03	37.1 3.64	44.6 4.37	44.9 4.40	56.1 5.50	67.3 6.60	80.8 7.92	89.8 8.80	112.2 11.00	134.6 13.19	151.0 14.80	181.2 17.75	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
		Cont.	kgfcm N.m	2.2 0.21	3.2 0.32	3.9 0.38	5.4 0.53	6.5 0.63	8.1 0.79	9.7 0.95	12.2 1.19	14.6 1.43	17.6 1.72	17.7 1.73	22.1 2.17	26.5 2.60	31.8 3.12	35.4 3.47	44.2 4.33	53.0 5.20	59.5 5.83	71.4 6.99	79.3 7.77	95.2 9.33	119.0 11.66	142.7 13.99
9TDG□ -30F2H	9HBK□BH 9HFK□BH	5min.	kgfcm N.m	-	8.2 0.81	9.9 0.97	-	16.4 1.61	-	24.7 2.42	30.9 3.03	37.1 3.64	44.6 4.37	44.9 4.40	56.1 5.50	67.3 6.60	80.8 7.92	-	112.2 11.00	134.6 13.19	151.0 14.80	181.2 17.75	201.3 19.73	241.6 23.67	300.0 29.40	300.0 29.40
		Cont.	kgfcm N.m	-	3.2 0.32	3.9 0.38	-	6.5 0.63	-	9.7 0.95	12.2 1.19	14.6 1.43	17.6 1.72	17.7 1.73	22.1 2.17	26.5 2.60	31.8 3.12	-	44.2 4.33	53.0 5.20	59.5 5.83	71.4 6.99	79.3 7.77	95.2 9.33	119.0 11.66	142.7 13.99

### 50Hz

Motor Model	Gearbox Model	Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
9TDG□ -30F2P	9PBK□BH 9PFK□BH	5min.	kgfcm N.m	5.5 0.54	8.2 0.81	9.9 0.97	13.7 1.34	16.4 1.61	20.5 2.01	24.7 2.42	30.9 3.03	37.1 3.64	44.6 4.37	44.9 4.40	56.1 5.50	67.3 6.60	80.8 7.92	89.8 8.80	112.2 11.00	134.6 13.19	151.0 14.80	181.2 17.75	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
		Cont.	kgfcm N.m	2.2 0.21	3.2 0.32	3.9 0.38	5.4 0.53	6.5 0.63	8.1 0.79	9.7 0.95	12.2 1.19	14.6 1.43	17.6 1.72	17.7 1.73	22.1 2.17	26.5 2.60	31.8 3.12	35.4 3.47	44.2 4.33	53.0 5.20	59.5 5.83	71.4 6.99	79.3 7.77	95.2 9.33	119.0 11.66	142.7 13.99
9TDG□ -30F2H	9HBK□BH 9HFK□BH	5min.	kgfcm N.m	-	8.2 0.81	9.9 0.97	-	16.4 1.61	-	24.7 2.42	30.9 3.03	37.1 3.64	44.6 4.37	44.9 4.40	56.1 5.50	67.3 6.60	80.8 7.92	-	112.2 11.00	134.6 13.19	151.0 14.80	181.2 17.75	201.3 19.73	241.6 23.67	300.0 29.40	300.0 29.40
		Cont.	kgfcm N.m	-	3.2 0.32	3.9 0.38	-	6.5 0.63	-	9.7 0.95	12.2 1.19	14.6 1.43	17.6 1.72	17.7 1.73	22.1 2.17	26.5 2.60	31.8 3.12	-	44.2 4.33	53.0 5.20	59.5 5.83	71.4 6.99	79.3 7.77	95.2 9.33	119.0 11.66	142.7 13.99

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

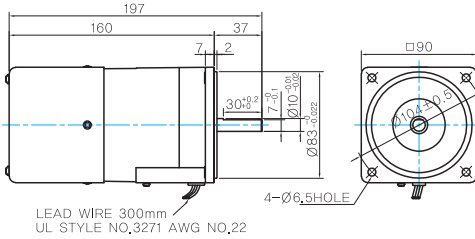
## Motor Images



## Dimensions

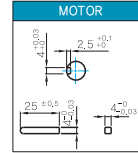
### MOTOR ONLY

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



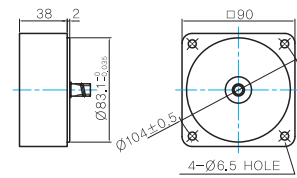
- MOTOR OUTPUT SHAFT
- KEY SPEC

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



### INTER-DECIMAL GEARBOX

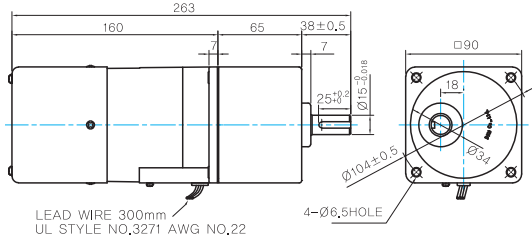
- MODEL: 9XD10□□



### GEARED MOTOR

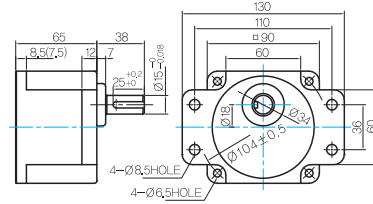
#### P TYPE GEARBOX

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



- GEARBOX MODEL:  
9PBK□BH

- GEARBOX MODEL:  
9PFK□BH



- GEARBOX OUTPUT SHAFT

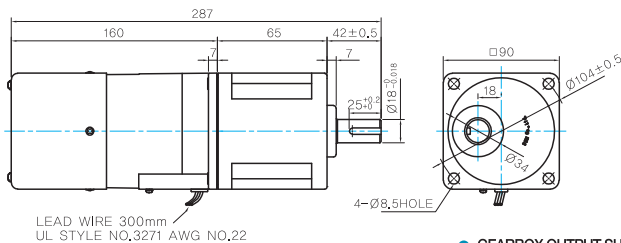
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

- KEY SPEC

GEARBOX

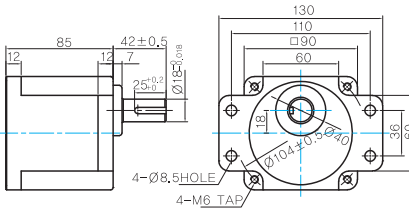
#### H TYPE GEARBOX

- 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	

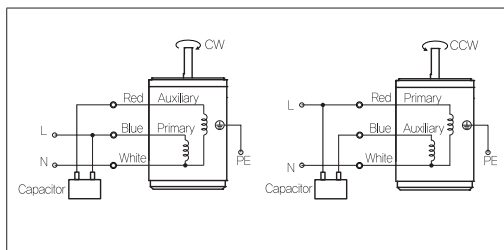
- KEY SPEC

GEARBOX

### WEIGHT

PART	WEIGHT(Kg)
MOTOR	2.7
9PB(F)K2BH ~ 9PB(F)K18BH	1.3
9PB(F)K20BH ~ 9PB(F)K200BH	1.4
9HB(F)K3BH ~ 9HB(F)K9BH	1.45
9HB(F)K12.5BH ~ 9HB(F)K18BH	1.5
9HB(F)K20BH ~ 9HB(F)K60BH	1.7
9HB(F)K75BH ~ 9HB(F)K200BH	1.8
9XD10□□	0.5

## 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.