

# C DC Motors

DC Motor 60W(□90mm)

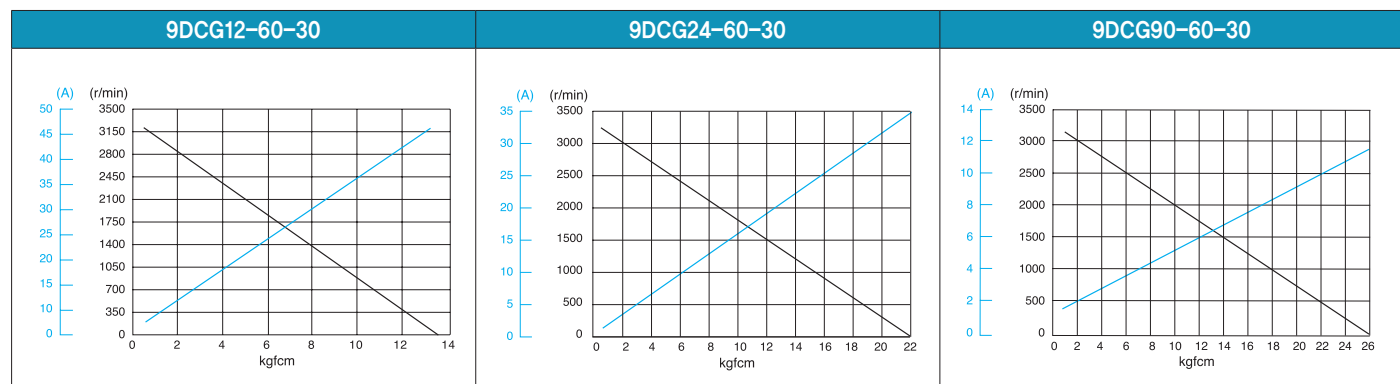
## 60W DC Motor 60W(□90mm)

### Motor Specification

Model 9DCP(W)□-60-30: Gear Type Shaft 9DCD□-60-30: D-Cut Type Shaft 9DCK□-60-30: Key Type Shaft	Output W	Voltage V	Starting Current A	Starting Torque		No Load		Rated Load			
				kgfcm	N.m	Current A	Speed r/min	Current A	Speed r/min	Torque kgfcm N.m	
9DCP(W)12-60-30	60	12	50.00	13.00	1,300	2.00	3400	8.50	2900	1.95	0.195
9DCP(W)24-60-30	60	24	36.00	19.00	1,900	1.15	3300	4.30	3000	1.95	0.195
9DCP(W)90-60-30	60	90	11.50	25.00	2,500	0.02	3250	0.80	3000	1.95	0.195

- 1) Enter the phase & voltage code in the in the box (□) within the motor model name.
- 2) Gear Type Shaft are for attaching Gearbox and D-Cut & Key Type Shafts are for using motor only.

### Performance Curve



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

Motor Model	Gearbox Model	Gear Ratio r/min	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		
9DCP □ -60- 30	9PBK □ BH  9PFK □ BH	Rated	kgfcm	3.2	4.9	5.8	8.1	9.7	12.1	14.6	18.3	21.9	26.3	26.5	33.2	39.8	47.7	53.0	66.3	79.6	89.2	107.1	119.0	142.7	178.4	200.0	200.0	
		N.m	0.32	0.48	0.57	0.79	0.95	1.19	1.43	1.79	2.15	2.58	2.60	3.25	3.90	4.68	5.20	6.50	7.80	8.74	10.49	11.66	13.99	17.49	19.60	19.60		
		12V	kgfcm	21.6	32.4	38.8	54.0	64.7	80.9	97.1	121.9	146.3	175.5	176.8	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	200.0
		N.m	2.11	3.17	3.81	5.29	6.34	7.93	9.52	11.94	14.33	17.20	17.33	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	19.60	
		24V	kgfcm	31.5	47.3	56.8	78.9	94.6	118.3	141.9	178.1	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	200.0	200.0	200.0	200.0
N.m	3.09	4.64	5.56	7.73	9.27	11.59	13.91	17.46	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	19.60	19.60	19.60	19.60	19.60		
90V	kgfcm	41.5	62.3	74.7	103.8	124.5	155.6	186.8	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	200.0	200.0	200.0	200.0	200.0		
N.m	4.07	6.10	7.32	10.17	12.20	15.25	18.30	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60		

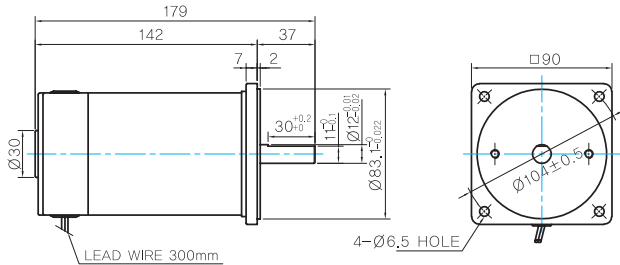
Motor Model	Gearbox Model	Gear Ratio		Gear Ratio										
		r/min	r/min	10	12	15	18	25	30	36	50	60		
9DCW□-60-30	9WD□BL/□BR/ □BRL	Rated	kgfcm	300	250	200	167	120	100	83	60	50	64.4	
			N.m	1.57	1.83	2.21	2.55	3.34	3.78	4.40	5.73	6.31		
		12V	kgfcm	106.6	124.8	150.2	153.1	142.9	163.3	153.1	142.9	122.4	122.4	
			N.m	10.45	12.23	14.71	15.00	14.00	16.00	15.00	14.00	12.00	12.00	
		24V	kgfcm	155.8	153.1	163.3	153.1	142.9	163.3	153.1	142.9	122.4	122.4	
			N.m	15.27	15.00	16.00	15.00	14.00	16.00	15.00	14.00	12.00	12.00	
		90V	kgfcm	163.3	153.1	163.3	153.1	142.9	163.3	153.1	142.9	122.4	122.4	
N.m	16.00		15.00	16.00	15.00	14.00	16.00	15.00	14.00	12.00	12.00			

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

## Dimensions

### MOTOR ONLY

- MOTOR MODEL: 9DCD□-60-30

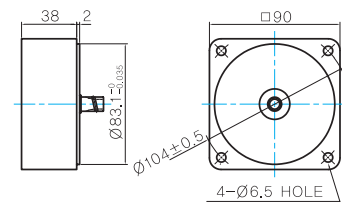


### MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	
9DCD□-60-30	
KEY TYPE	
9DCK□-60-30	

### INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□



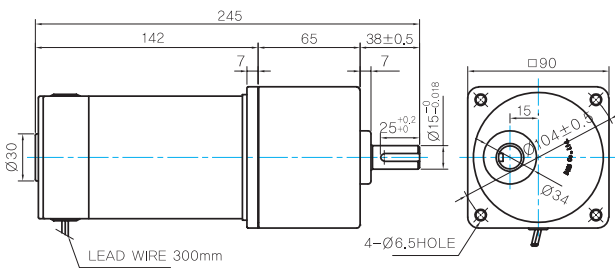
### KEY SPEC

GEARBOX	

### GEARED MOTOR

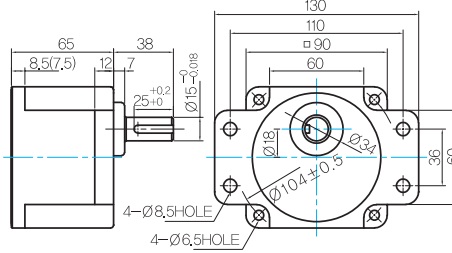
#### P TYPE GEARBOX

- MOTOR MODEL: 9DCP□-60-30



- GEARBOX MODEL: 9PBK□BH

- GEARBOX MODEL: 9PFK□BH



#### GEARBOX OUTPUT SHAFT

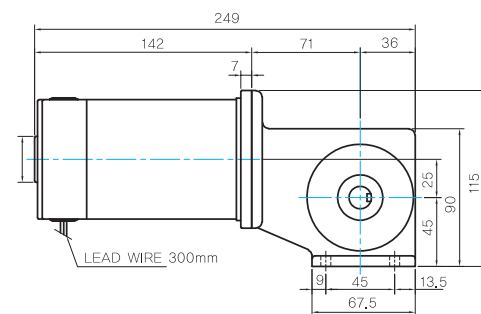
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

#### KEY SPEC

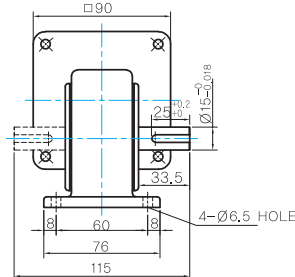
GEARBOX	

#### W TYPE GEARBOX

- MOTOR MODEL: 9DCW□-60-30



- GEARBOX MODEL: 9WD□BL/BR/BRL



#### KEY SPEC

GEARBOX	

#### WEIGHT

PART	WEIGHT(kg)	
MOTOR	1.9	
GEAR BOX	9PB(F)K2BH ~ 9PB(F)K18BH	1.3
	9PB(F)K20BH ~ 9PB(F)K180BH	1.4
9WD□BL/BR/BRL	1.0	
9XD10□□	0.5	

## Motor Images

