

# B AC Motors

## E.M. Brake Motor 180W (□90mm)

# 180W

Electromagnetic  
Brake Motor  
180W(□90mm)

### Motor Specification

Model 9BDG*-180F□: Gear Type Shaft 9BDD*-180F: D-Cut Type Shaft 9BDK*-180F: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque		Rated Load			Capacitor μF / VAC	
						kgfcm	N.m	Speed r/min	Current A	Torque kgfcm N.m		
9BDGD-180F□	180	1∅220	60	4	30min.	7.40	0.740	1550	1.60	11.40	1.140	8.0 / 450
9BDGE-180F□	180	1∅220	50	4	30min.	7.00	0.700	1250	1.50	14.00	1.400	8.0 / 450
		1∅240				7.80	0.780		1.60	14.80	1.480	

- 1) Enter the phase & voltage code in the place \* and enter the model type of attaching gearhead in the box (□) within the motor model name.
- 2) All models contain a built-in thermal protector.
- 3) Gear Type Shaft is for attaching gearhead and D-Cut & Key Type Shafts are for using motor only.

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

#### 60Hz

Motor Model	Gearhead Model	Gear Ratio r/min	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	
			kgfcm	500	300	200	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	
9BDG□ -180FH	9HBK□BH 9HFK□BH	kgfcm	28.4	34.1	56.8	85.2	106.9	128.3	153.9	155.0	193.8	232.6	279.1	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	2.78	3.34	5.56	8.35	10.47	12.57	15.08	15.19	18.99	22.79	27.35	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40

Motor Model	Gearhead Model	Gear Ratio r/min	7.5	10	15	20	25	30	40	50	60	80
			kgfcm	240	180	120	90	72	60	45	36	30
9BDG□-180FWH	9WHD□	kgfcm	71.8	92.3	130.0	164.2	188.1	204.1	183.7	173.5	163.3	132.7
		N.m	7.04	9.05	12.74	16.09	18.43	20.00	18.00	17.00	16.00	13.00

#### 50Hz

Motor Model	Gearhead Model	Gear Ratio r/min	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
			kgfcm	500	417	250	167	120	100	83	75	60	50	42	30	25	20	17	15	13	10
9BDG□ -180FH	9HBK□BH 9HFK□BH	kgfcm	36.9	44.2	73.7	110.6	138.8	166.5	199.8	201.3	251.6	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	3.61	4.33	7.22	10.83	13.60	16.32	19.58	19.73	24.66	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40

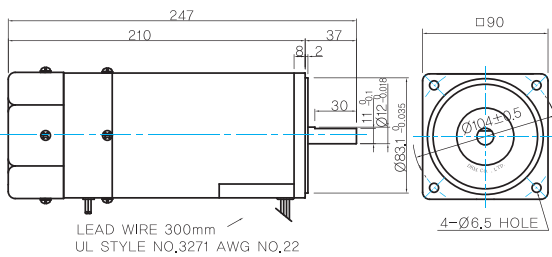
Motor Model	Gearhead Model	Gear Ratio r/min	7.5	10	15	20	25	30	40	50	60	80
			kgfcm	200	150	100	75	60	50	38	30	25
9BDG□-180FWH	9WHD□	kgfcm	93.2	119.9	168.7	183.7	214.3	204.1	183.7	173.5	163.3	132.7
		N.m	9.14	11.75	16.53	18.00	21.00	20.00	18.00	17.00	16.00	13.00

- 1) Enter the phase & voltage code in the box (□) within the motor model name.
- 2) Enter the gear ratio in the box (□) within the gearhead 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

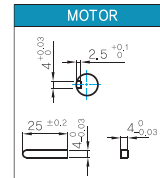
- MOTOR MODEL:  
9BDD□-180F (GENERAL FAN)



### MOTOR OUTPUT SHAFT

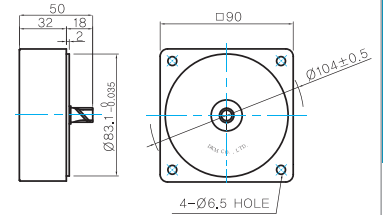
MODEL	SPEC
D-CUT TYPE	
9BDD□-180F	
KEY TYPE	
9BDK□-180F	

### KEY SPEC



### INTER-DECIMAL GEARHEAD

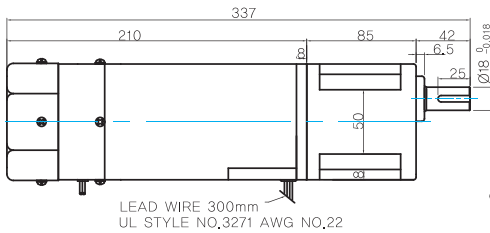
- MODEL:  
9XD10M□



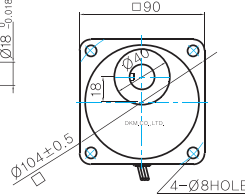
## GEARED MOTOR

### H TYPE GEARHEAD

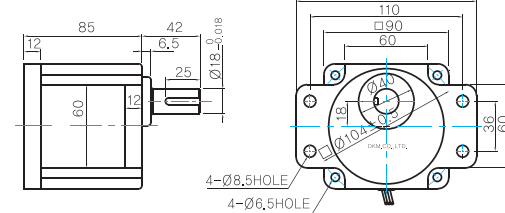
- MOTOR MODEL:  
9BDG□-180FH (GENERAL FAN)



- GEARHEAD MODEL:  
9HBK□BH



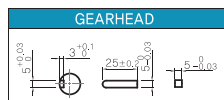
- GEARHEAD MODEL:  
9HFK□BH



### GEARHEAD OUTPUT SHAFT

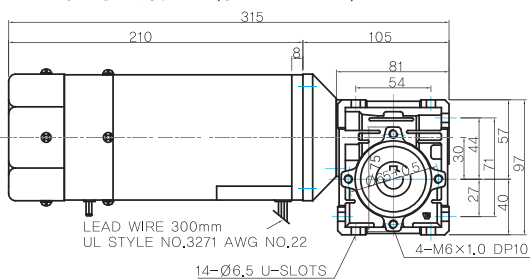
MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

### KEY SPEC

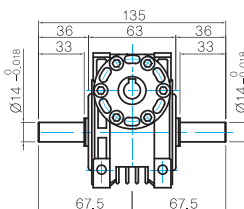


### WH TYPE GEARHEAD

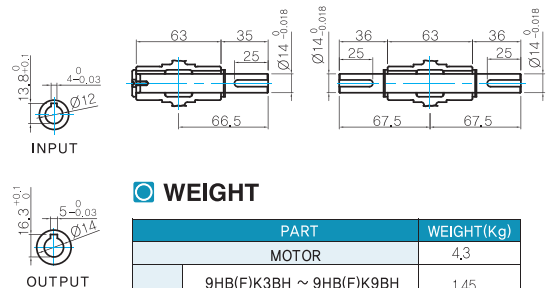
- MOTOR MODEL:  
9BDG□-180FWH (GENERAL FAN)



- GEARHEAD MODEL:  
9WHD□



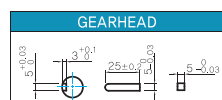
- SHAFT (Unidirectional, Bi-directional)



### WEIGHT

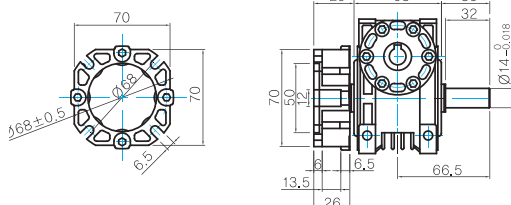
PART	WEIGHT (Kg)	
MOTOR	4.3	
GEAR HEAD	9HB(F)K3BH ~ 9HB(F)K9BH	1.45
	9HB(F)K12.5BH ~ 9HB(F)K18BH	1.5
	9HB(F)K20BH ~ 9HB(F)K60BH	1.7
	9HB(F)K75BH ~ 9HB(F)K180BH	1.8
	9WHD□	1.13
9XD10M□	0.5	

### KEY SPEC



\* The output flange and shafts are sold separately.

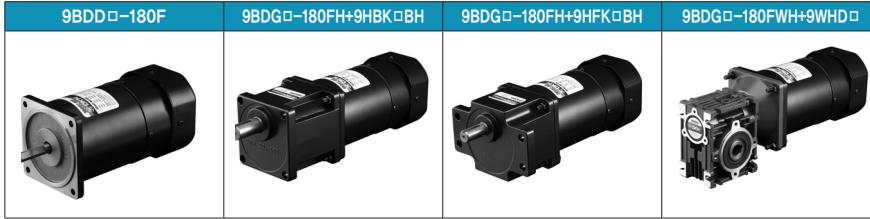
### FLANGE



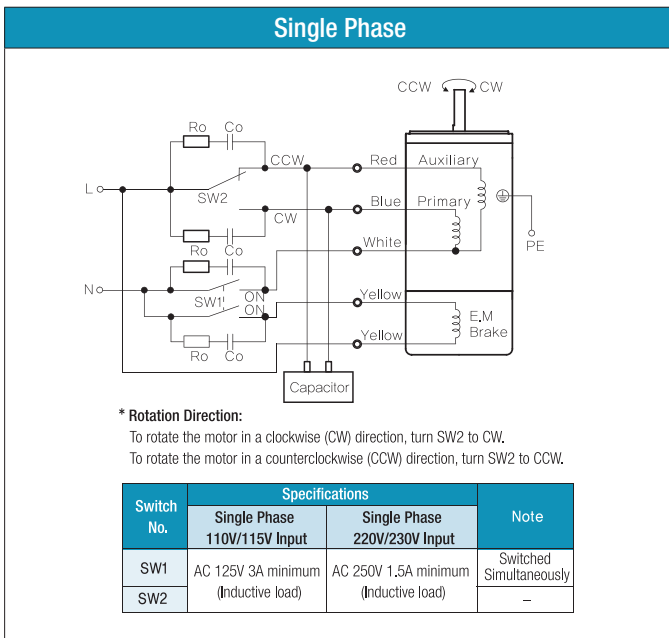
# B AC Motors

## E.M. Brake Motor 180W (□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) SW1 operates both motor and electromagnetic brake action.
- 4) The electromagnetic brake will be released and the motor will rotate when SW1 is switched simultaneously to ON. When SW1 is switched simultaneously to OFF, the motor stops immediately with the electromagnetic brake and holds the load.
- 5) If you wish to release the brake while the motor is stopped, apply voltage between the two brake lead wires (yellow).
- 6) Ro and Co indicate CR circuit for surge suppression. [Ro=5~200Ω, Co=0.1~0.2μF, 200WV (400WV)]