

# ELECTROMAGNETIC BRAKE MOTOR

(Power off activated type)

## 200W

□90mm(3.54in.)



LEAD WIRE TYPE MOTOR    LEAD WIRE TYPE MOTOR    TERMINAL BOX TYPE MOTOR    LEAD WIRE TYPE MOTOR

### Motor Specification - 30min. Rating (Continuous : F2 fan)



Model		Starting Time	Output	Voltage	Freq.	Current	Starting Torque	Rated Torque	Rated Speed	Capacitor			
Lead Wire Type	Terminal Box Type									HP	W	VAC	Hz
9BDG□-200P(H)	Pinion Shaft Type	30min	1/4	220	50	1.80	14500	1500	1500	212	1300	-	-
9BDD□-200	D-Cut Shaft Type												
9BDG(D)G-200P(H)	9BDG(D)G-200P(H)-T												
9BDG(D)H-200P(H)	9BDG(D)H-200P(H)-T												
9BDG(D)I-200P(H)	9BDG(D)I-200P(H)-T	30min	1/4	380	50	0.90	14500	1500	1500	212	1300	-	-
9BDG(D)J-200P(H)	9BDG(D)J-200P(H)-T												
9BDG(D)K-200P(H)	9BDG(D)K-200P(H)-T	30min	1/4	400	50	0.68	14500	1500	1500	212	1300	-	-
9BDG(D)L-200P(H)	9BDG(D)L-200P(H)-T												
9BDG(D)M-200P(H)	9BDG(D)M-200P(H)-T	30min	1/4	440	50	0.68	14500	1500	1500	212	1300	-	-
9BDG(D)N-200P(H)	9BDG(D)N-200P(H)-T												
9BDG(D)O-200P(H)	9BDG(D)O-200P(H)-T			440	60		12500	1250	177	1550			

\* Enter the 'Phase & Voltage' code in the box(□) within the motor model name.

\* 'Pinion Shaft' is for attaching gearhead and 'D-Cut Shaft' is for using motor only.

(TP) : Contains a built-in thermal protector. If a motor overheats for any reason the thermal protector opened and the motor stops. When the motor temperature drops, the thermal protector closes and the motor restarts. Be sure to turn the motor off before inspecting. By attaching F2 FAN additionally, temperature reducing of over 10°C could be available.

### Permissible Torque When using gearhead

60Hz

Model	speed RPM (r/min)	900	600	500	360	300	240	200	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	
Motor/Gearhead	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	
9BDG□-200FP	9PBK□BH	kgf cm	28	30	36	51	61	76	91	114	137	164	200	200	200	200	200	200	200	200	200	200	200	200	200
	9PFB□BH	N.m	2.8	3	4	5	6	8	9	11	14	16	20	20	20	20	20	20	20	20	20	20	20	20	20
9BDG□-200FH	9HBK□BH	kgf cm	-	32	38.3	-	64	-	96	120	144	173	-	216	259	300	-	300	300	300	300	300	300	300	300
		N.m	-	3	4	-	6	-	10	12	14	17	-	22	26	30	-	30	30	30	30	30	30	30	30
		lb-in	25	27	32	45	54	67	81	101	121	145	177	177	177	177	177	177	177	177	177	177	177	177	177
		lb-in	-	28	34	-	57	-	85	106	127	153	-	191	229	265	-	265	265	265	265	265	265	265	265

50Hz

Model	speed RPM (r/min)	750	500	417	300	250	200	167	120	100	83	75	60	50	42	38	30	25	20	17	15	13	10	8	
Motor/Gearhead	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	
9BDG□-200FP	9PBK□BH	kgf cm	33	37	45	62	74	92	111	139	166	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	9PFB□BH	N.m	3.3	4	4	6	7	9	11	14	17	20	20	20	20	20	20	20	20	20	20	20	20	20	20
9BDG□-200FH	9HBK□BH	kgf cm	-	39	47	-	78	-	117	146	175	210	-	262	300	300	-	300	300	300	300	300	300	300	300
		N.m	-	4	5	-	8	-	12	15	18	21	-	26	30	30	-	30	30	30	30	30	30	30	30
		lb-in	29	33	39	54	65	82	98	122	147	176	177	177	177	177	177	177	177	177	177	177	177	177	177
		lb-in	-	34	42	-	69	-	103	129	155	185	-	231	265	265	-	265	265	265	265	265	265	265	265

\* Enter the gear ratio in the box (□) within the gearhead model name. A colored background indicates gear shaft rotation in the same direction as the motor shaft ; a white background indicates rotation in the opposite direction.

\* The speed is calculated by dividing the motor's synchronous speed (50Hz : 1500 r/min, 60 Hz : 1800 r/min) by the gear ratio.

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

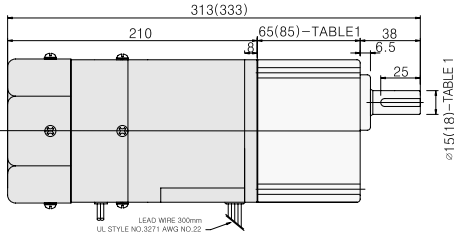
\* If more slow speed is needed than above value, use decimal gearhead with a gear ratio of 10:1 could be used between general gearhead and motor. Even in this case, just speed will be reduced without increase in permissible torque; the maximum permissible torque is 200kgfcm (P type) / 300kgfcm (H type).

## Dimension

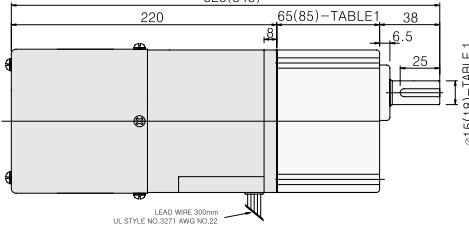
### LEAD WIRE TYPE

#### GEARED MOTOR

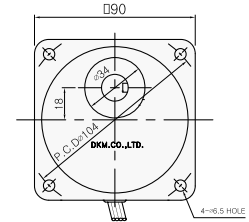
\* MOTOR MODEL : 9BD□-200FP(H) (GENERAL FAN)  
 \* GEARHEAD MODEL : 9PB□3BH - 9PB□180BH



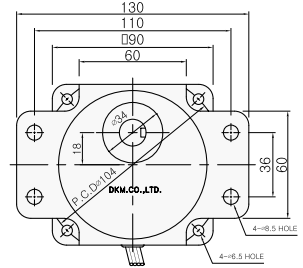
\* MOTOR MODEL : 9BDG□-200F2P(H) (POWERFUL FAN)  
 \* GEARHEAD MODEL : 9PB□3BH - 9PB□180BH



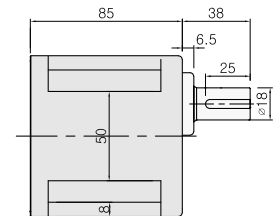
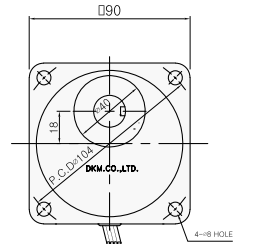
\* GEARHEAD MODEL : 9PB□3BH - 9PB□180BH



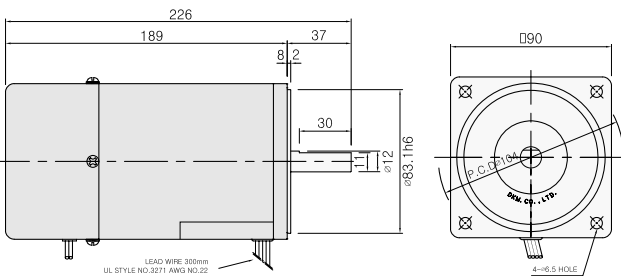
\* GEARHEAD MODEL : 9PF□3BH - 9PF□180BH



\* GEARHEAD MODEL : 9HB□3BH - 9HB□180BH

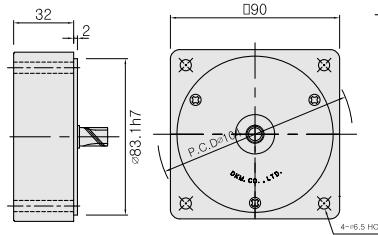


#### MOTOR ONLY \* MOTOR MODEL : 9BD□-200(NO FAN)



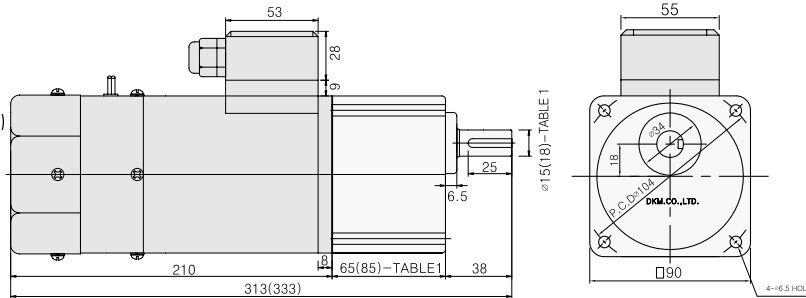
#### INTER-DECIMAL GEARHEAD

\* MODEL : 9XD10M□



### TERMINAL BOX TYPE

\* MOTOR MODEL : 9BDG□-200FP(H)-T (GENERAL FAN)

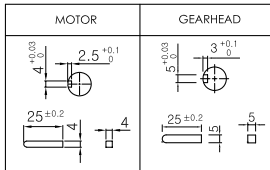


\* Note : There are 3 kinds of fan type (No Fan / General Fan / Powerful Fan). Customer can choose fan type according to wanted rating time.

#### 65(85)-TABLE1

SIZE(mm)	GEARHEAD TYPE
65 - $\phi 15$	P TYPE GEARHEAD
85 - $\phi 18$	H TYPE GEARHEAD

#### KEY SPEC



#### WEIGHT

PART	WEIGHT(Kg)	
MOTOR	4.3	
DECIMAL GEARHEAD	0.5	
GEAR HEAD	GEARHEAD TYPE	
	9P(H)□3BH - 9P(H)□9BH	1.3    1.45
	9P(H)□12.5BH - 9P(H)□18BH	1.3    1.5
	9P(H)□25BH - 9P(H)□60BH	1.4    1.7
	9P(H)□90BH - 9P(H)□180BH	1.4    1.8

#### GEARHEAD OUTPUT

MODEL	P TYPE	H TYPE
ROUND TYPE		
9P(H)□S3BH - 9P(H)□S180BH	38, $\phi 15$	38, $\phi 18$
D-CUT TYPE		
9P(H)□D3BH - 9P(H)□D180BH	38, 25, $\phi 15$ , 1.4, 1.7	38, 25, $\phi 18$ , 1.7, 1.8
KEY TYPE		
9P(H)□K3BH - 9P(H)□K180BH	38, 25, $\phi 15$ ★	38, 25, $\phi 18$ ★

#### MOTOR OUTPUT

MODEL	SHAFT
GEAR TYPE	18.5(22)
9BDG□-200□P(H)	
ROUND TYPE	37, $\phi 12$
9BDS□-200□	
D-CUT TYPE	37, 30, 1.3, $\phi 12$ ★
9BDD□-200□	
KEY TYPE	37, 25, $\phi 12$
9BDK□-200□	

\* Note : Above table indicates output shaft dimension made by user's request and ★ indicates the basic dimension in factory shipping.

## Connection Diagrams Please refer to page 99.