

## Induction Motor 120W(□90mm)

# 120W Induction Motor 120W(□90mm)

### Motor Specification

Model		Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque		Rated Load			Capacitor μF / VAC	
Lead Wire Type	Terminal Box Type						kgfcm	N.m	Speed r/min	Current A	Torque kgfcm N.m		
9IDG*~120F□(-T): Gear Type Shaft	9IDGA~120F□-T	120	1∅110	60	4	Cont.	6.60	0.660	1600	2.00	7.40	0.740	25.0 / 250
9IDD*~120F(-T): D-Cut Type Shaft	9IDGD~120F□-T	120	1∅220	60	4	Cont.	6.00	0.600	1600	1.00	7.60	0.760	6.0 / 450
9IDK*~120F(-T): Key Type Shaft	9IDGE~120F□-T	120	1∅220 1∅240	50	4	Cont.	6.60 8.00	0.660 0.800	1250	0.90 1.00	9.40 10.20	0.940 1.020	6.5 / 450
	9IDGG~120F□-T	120	3∅220	50 60	4	Cont.	22.00 20.00	2.200 2.000	1300 1550	0.82 0.78	9.20 7.80	0.920 0.780	-
	9IDGK~120F□-T	120	3∅380 3∅400 3∅415 3∅440	50 60 50 60	4	Cont.	25.00 20.00 27.40 21.80 29.80 23.80 32.00 26.80	2.500 2.000 2.740 2.180 2.980 2.380 3.200 2.680	1300 1550 1300 1550 1300 1600 1350 1600	0.48 0.43 0.53 0.45 0.57 0.44 0.64 0.48	9.00 8.00 9.80 8.60 10.00 7.80 8.80 8.60	0.900 0.800 0.980 0.860 1.000 0.780 0.880 0.860	-

- 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
		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	9
9IDG□ -120FP	9PBK□BH 9PFK□BH	kgfcm N.m	12.6 1.24	18.9 1.85	22.7 2.23	31.5 3.09	37.8 3.71	47.3 4.64	56.8 5.56	71.3 6.98	85.5 8.38	102.6 10.05	103.4 10.13	129.2 12.66	155.0 15.19	186.0 18.23	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
9IDG□ -120FH	9HBK□BH 9HFK□BH	kgfcm N.m	- 1.85	18.9 2.23	- 2.23	37.8 3.71	- 3.71	56.8 5.56	71.3 6.98	85.5 8.38	102.6 10.05	103.4 10.13	129.2 12.66	155.0 15.19	186.0 18.23	- 25.32	258.4 25.32	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	300.0 29.40

Motor Model	Gearbox Model	Gear Ratio	10	12	15	18	25	30	36	50	60
		r/min	180	150	120	100	72	60	50	36	30
9IDG□ -120FW	9WD□BL/ □BR/□BRL	kgfcm N.m	62.3 6.11	73.0 7.15	87.8 8.60	101.2 9.92	133.0 13.03	150.5 14.75	153.1 15.00	142.9 14.00	122.4 12.00

Motor Model	Gearbox Model	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
		r/min	240	180	120	90	72	60	45	36	30	22
9IDG□ -120FWH	9WHD□ -030	kgfcm N.m	47.9 4.69	61.6 6.03	86.6 8.49	109.4 10.73	125.4 12.29	145.9 14.30	179.4 17.58	173.5 17.00	163.3 16.00	132.7 13.00

#### 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
		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	7.5
9IDG□ -120FP	9PBK□BH 9PFK□BH	kgfcm N.m	16.3 1.59	24.4 2.39	29.3 2.87	40.7 3.99	48.8 4.78	61.0 5.98	73.2 7.17	101.7 9.96	122.0 11.96	146.4 14.35	162.7 15.94	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	
9IDG□ -120FH	9HBK□BH 9HFK□BH	kgfcm N.m	- 2.39	24.4 2.87	29.3 2.87	48.8 4.78	- 4.78	73.2 7.17	91.9 9.00	110.3 10.80	132.3 12.97	133.3 13.06	166.6 16.33	199.9 19.59	239.9 23.51	- 23.51	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	

Motor Model	Gearbox Model	Gear Ratio	10	12	15	18	25	30	36	50	60
		r/min	150	125	100	83	60	50	42	30	25
9IDG□ -90FW	9WD□BL/ □BR/□BRL	kgfcm N.m	80.4 7.88	94.1 9.22	113.2 11.09	130.5 12.79	142.9 14.00	163.3 16.00	153.1 15.00	142.9 14.00	122.4 12.00

Motor Model	Gearbox Model	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80
		r/min	200	150	100	75	60	50	38	30	25	18
9IDG□ -120FWH	9WHD□ -030	kgfcm N.m	61.7 6.05	79.4 7.78	111.7 10.95	141.1 13.83	161.7 15.85	188.2 18.44	183.7 18.00	173.5 17.00	163.3 16.00	132.7 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 Gearbox model name.
- 3) A colored background indicates gear shift 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.

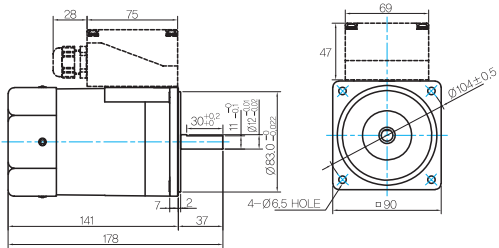
# B AC Motors

## Induction Motor 120W(□90mm)

### Dimensions

#### MOTOR ONLY

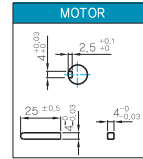
- MOTOR MODEL:  
9IDD□-120F(-T) (GENERAL FAN)



- MOTOR OUTPUT SHAFT

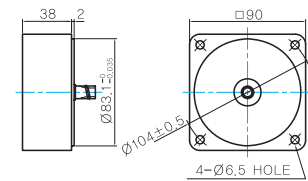
MODEL	SPEC
D-CUT TYPE	
KEY TYPE	
9IDD□-120F	
9IDK□-120F	

- KEY SPEC



#### INTER-DECIMAL GEARBOX

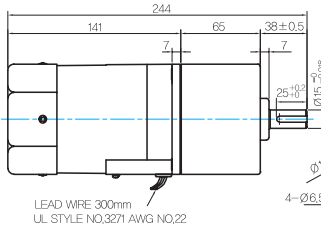
- MODEL:  
9XD10□□



### GEARED MOTOR

#### P TYPE GEARBOX

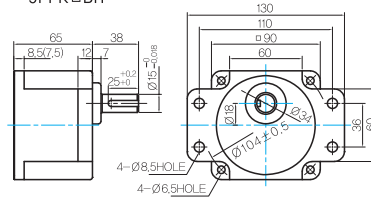
- MOTOR MODEL:  
9IDG□-120FP (GENERAL FAN)



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

- GEARBOX MODEL:  
9PBK□BH

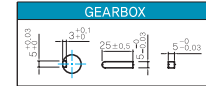
- GEARBOX MODEL:  
9PFK□BH



- GEARBOX OUTPUT SHAFT

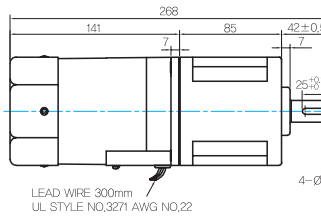
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

- KEY SPEC



#### H TYPE GEARBOX

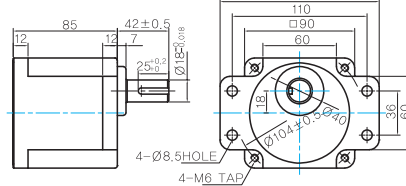
- MOTOR MODEL:  
9IDG□-120FH (GENERAL FAN)



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

- GEARBOX MODEL:  
9HBK□BH

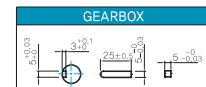
- GEARBOX MODEL:  
9HFK□BH



- GEARBOX OUTPUT SHAFT

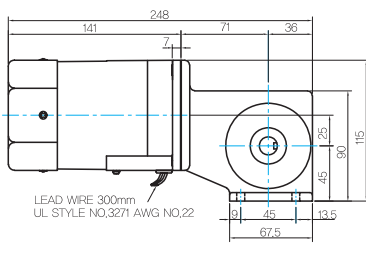
MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

- KEY SPEC



#### W TYPE GEARBOX

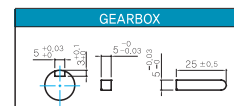
- MOTOR MODEL:  
9IDG□-120FW (GENERAL FAN)



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

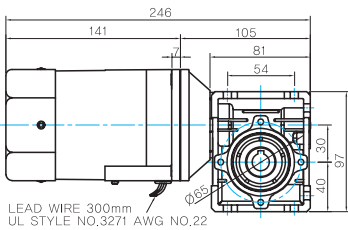
- GEARBOX MODEL:  
9WD□BL/BR/BRL

- KEY SPEC



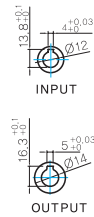
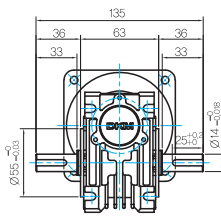
WH TYPE GEARBOX

MOTOR MODEL:  
9IDG□-120FWH (GENERAL FAN)

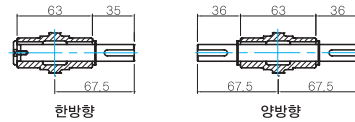


LEAD WIRE 300mm  
UL STYLE NO.3271 AWG NO.22

GEARBOX MODEL:  
9WHD□-030



SHAFT



한방향

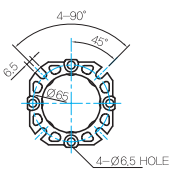
양방향

WEIGHT

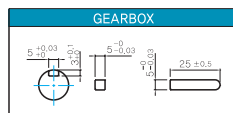
PART	WEIGHT(Kg)	
MOTOR	3.0	
GEAR BOX	9PB(F)K2BH ~ 9PB(F)K18BH	1.3
	9PB(F)K20BH ~ 9PB(F)K200BH	1.4
	9HB(F)K3BH ~ 9HB(F)K9BH	1.45
	9HB(F)K12.5BH ~ 9HB(F)K18BH	1.5
	9HB(F)K20BH ~ 9HB(F)K60BH	1.7
	9HB(F)K75BH ~ 9HB(F)K200BH	1.8
	9WD□BL/BR/BRL	1.0
	9WHD□-030	1.13
9XD10□	0.5	

\* 출력 FLANGE와 SHAFT는 별매입니다.

FLANGE



KEY SPEC



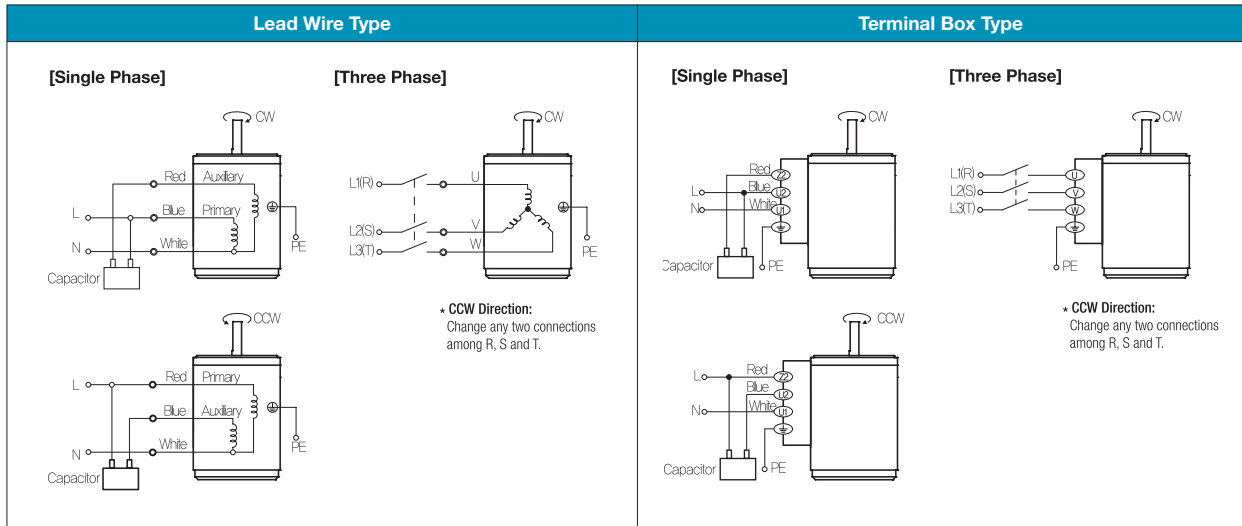
Motor Images

9IDD□-120F	9IDD□-120F-T	9IDG□-120FP+9PBK□BH	9IDG□-120FP+9PFK□BH
9IDG□-120FH+9HBK□BH	9IDG□-120FH+9HFK□BH	9IDG□-120FW+9WD□BL	9IDG□-120FWH+9WHD□-030

# B AC Motors

## Induction Motor 120W(□90mm)

### 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.