

Reversible Motor 90W(□90mm)

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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		
9RDG*~90F□(-T): Gear Type Shaft 9RDD*~90F(-T): D-Cut Type Shaft 9RDK*~90F(-T): Key Type Shaft													
9RDGA-90F□	9RDGA-90F□-T	90	1∅110	60	4	30min.	6.60	0.660	1600	2.00	6.40	0.640	25.0 / 250
9RDGD-90F□	9RDGD-90F□-T	90	1∅220	60	4	30min.	6.00	0.600	1600	0.97	6.60	0.660	6.0 / 450
9RDGE-90F□	9RDGE-90F□-T	90	1∅220 1∅240	50	4	30min.	6.40 7.80	0.640 0.780	1250	0.90 1.00	7.80 8.90	0.780 0.890	6.0 / 450

- 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 r/min	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
			900	600	500	360	300	240	200	144	120	100	90	72	60	50	45	36	30	24	20	18	15	12	10	9
9RDG□ -90FP	9PBK□BH 9PFK□BH	kgfcm N.m	11.0 1.07	16.4 1.61	19.7 1.93	27.4 2.68	32.9 3.22	41.1 4.03	49.3 4.83	61.9 6.06	74.3 7.28	89.1 8.73	89.76 8.80	112.2 11.00	134.6 13.19	161.1 15.83	179.5 17.59	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
9RDG□ -90FH	9HBK□BH 9HFK□BH	kgfcm N.m	- 1.61	16.4 1.93	19.7 1.93	- 3.22	32.9 3.22	- 4.83	49.3 6.06	61.9 7.28	74.3 8.73	89.1 8.73	89.8 8.80	112.2 11.00	134.6 13.19	161.6 15.83	- -	224.4 21.99	269.3 26.39	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 r/min	10	12	15	18	25	30	36	50	60
			180	150	120	100	72	60	50	36	30
9RDG□ -90FW	9WD□BL/ □BR/□BRL	kgfcm N.m	54.1 5.30	63.4 6.21	76.2 7.47	87.9 8.62	115.5 11.32	130.7 12.81	153.1 15.00	142.9 14.00	122.4 12.00

Motor Model	Gearbox Model	Gear Ratio r/min	7.5	10	15	20	25	30	40	50	60	80
			240	180	120	90	72	60	45	36	30	22
9RDG□ -90FWH	9WHD□ -030	kgfcm N.m	41.6 4.07	53.5 5.24	75.2 7.37	95.0 9.31	108.9 10.67	126.7 12.42	155.8 15.26	173.5 17.00	163.3 16.00	132.7 13.00

50Hz

Motor Model	Gearbox Model	Gear Ratio r/min	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
			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
9RDG□ -90FP	9PBK□BH 9PFK□BH	kgfcm N.m	12.9 1.27	19.4 1.90	23.3 2.28	32.4 3.17	38.8 3.81	48.6 4.76	58.3 5.71	73.1 7.17	87.8 8.60	105.3 10.32	106.1 10.40	132.6 12.99	159.1 15.59	190.9 18.71	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	
9RDG□ -90FH	9HBK□BH 9HFK□BH	kgfcm N.m	- 1.90	19.4 2.28	23.3 2.28	- 3.81	38.8 3.81	- 4.76	58.3 5.71	73.1 7.17	87.8 8.60	105.3 10.32	106.1 10.40	132.6 12.99	159.1 15.59	190.9 18.71	- 25.99	265.2 25.99	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 r/min	10	12	15	18	25	30	36	50	60
			150	125	100	83	60	50	42	30	25
9RDG□ -90FW	9WD□BL/ □BR/□BRL	kgfcm N.m	64.0 6.27	74.9 7.34	90.1 8.83	103.9 10.18	136.5 13.38	154.4 15.14	153.1 15.00	142.9 14.00	122.4 12.00

Motor Model	Gearbox Model	Gear Ratio r/min	7.5	10	15	20	25	30	40	50	60	80
			200	150	100	75	60	50	38	30	25	18
9RDG□ -90FWH	9WHD□ -030	kgfcm N.m	49.1 4.82	63.2 6.19	88.9 8.71	112.3 11.01	128.7 12.61	149.8 14.68	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 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.

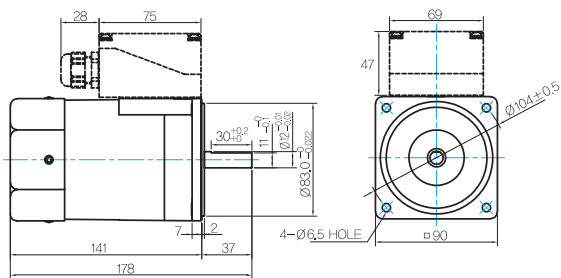
B AC Motors

Reversible Motor 90W(□90mm)

Dimensions

MOTOR ONLY

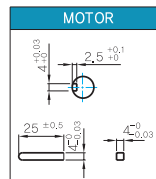
- MOTOR MODEL: 9RDD□-90F(-T) (GENERAL FAN)



MOTOR OUTPUT SHAFT

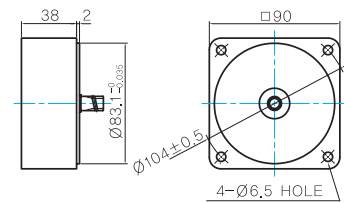
MODEL	SPEC
D-CUT TYPE	
KEY TYPE	
9RDD□-90F	
9RDK□-90F	

KEY SPEC



INTER-DECIMAL GEARBOX

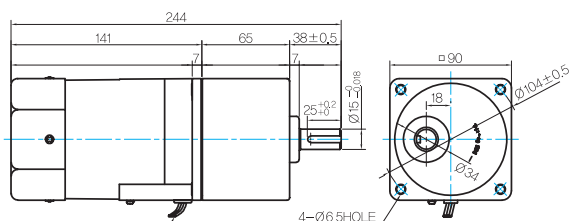
- MODEL: 9XD10□□



GEARED MOTOR

P TYPE GEARBOX

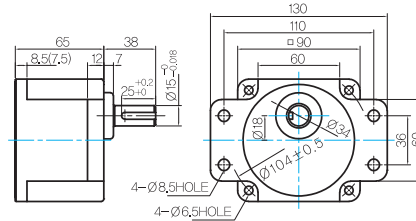
- MOTOR MODEL: 9RDG□-90FP (GENERAL FAN)



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

- GEARBOX MODEL: 9PBK□BH

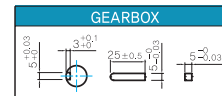
- GEARBOX MODEL: 9PFK□BHI



GEARBOX OUTPUT SHAFT

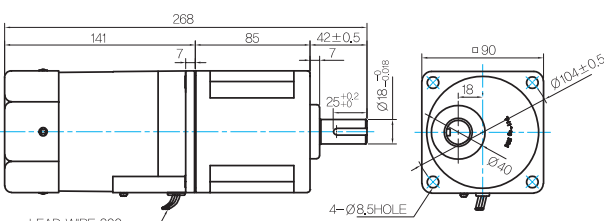
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

KEY SPEC



H TYPE GEARBOX

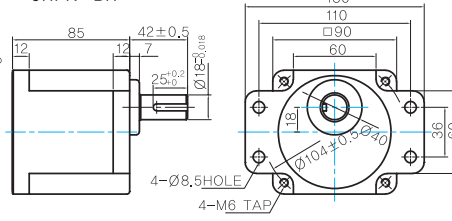
- MOTOR MODEL: 9RDG□-90FH (GENERAL FAN)



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

- GEARBOX MODEL: 9HBK□BH

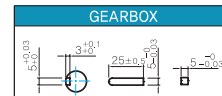
- GEARBOX MODEL: 9HFK□BH



GEARBOX OUTPUT SHAFT

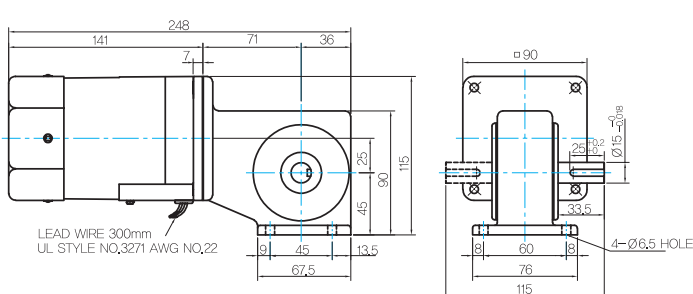
MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

KEY SPEC



W TYPE GEARBOX

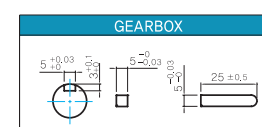
- MOTOR MODEL: 9RDG□-90FW (GENERAL FAN)



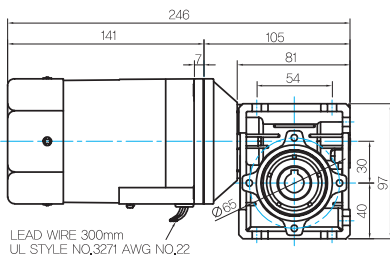
LEAD WIRE 300mm
UL STYLE NO,3271 AWG NO,22

- GEARBOX MODEL: 9WD□BL/BR/BRL

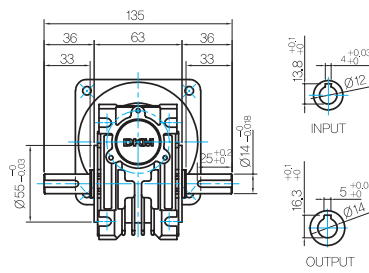
KEY SPEC



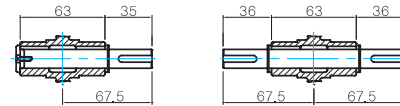
● MOTOR MODEL:
9RDG□-90FWH (GENERAL FAN)



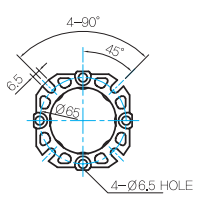
● GEARBOX MODEL:
9WHD□-030



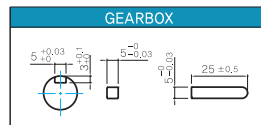
● SHAFT(Unidirectional, Bi-directional)



● FLANGE



● KEY SPEC

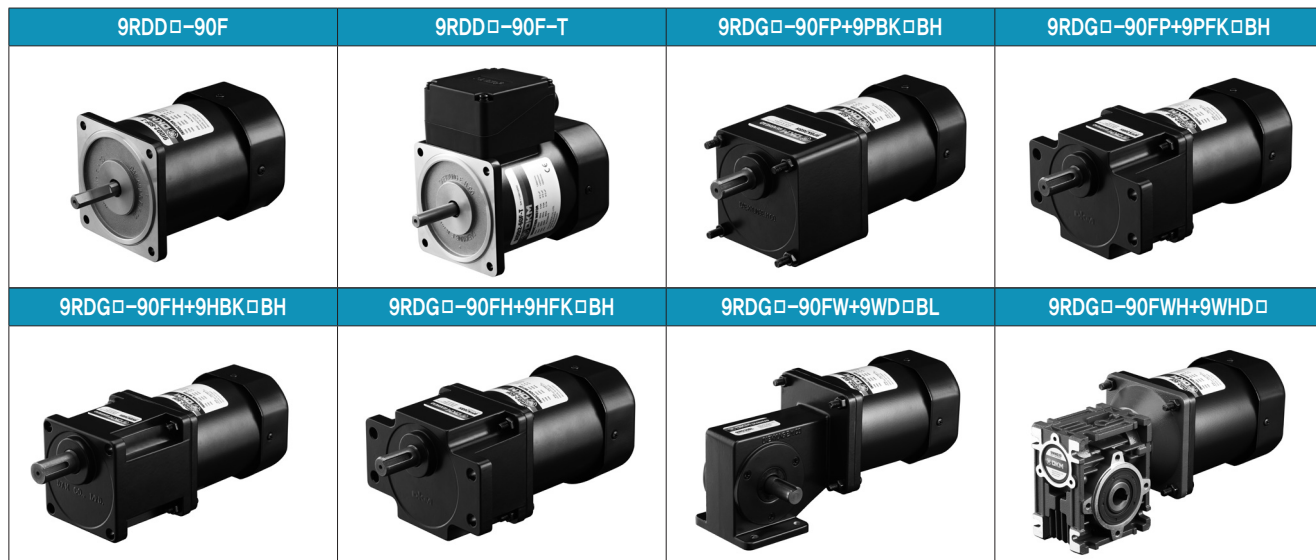


● WEIGHT

PART	WEIGHT(Kg)
MOTOR	3,0
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

* The output flange and shafts are sold separately.

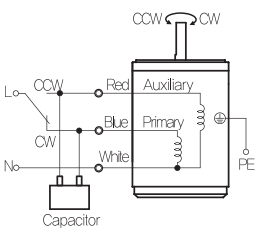
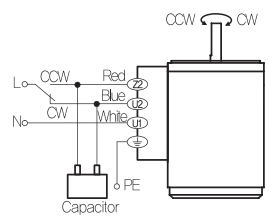
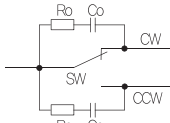
● Motor Images



B AC Motors

Reversible Motor 90W(□90mm)

Connection Diagrams

Lead Wire Type	Terminal Box Type						
							
	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th style="width: 15%;">Code</th> <th style="width: 85%;">Contact Capacity</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">SW</td> <td>AC125V 5A min. or AC250V 5A min. (Inductive load)</td> </tr> <tr> <td style="text-align: center;">Ro, Co</td> <td>Ro=5~200Ω Co=0.1~0.2μF, 200W (400W)</td> </tr> </tbody> </table> <p style="font-size: small; margin-top: 5px;">* Connect a CR circuit for surge suppression to protect the contact.</p>	Code	Contact Capacity	SW	AC125V 5A min. or AC250V 5A min. (Inductive load)	Ro, Co	Ro=5~200Ω Co=0.1~0.2μF, 200W (400W)
Code	Contact Capacity						
SW	AC125V 5A min. or AC250V 5A min. (Inductive load)						
Ro, Co	Ro=5~200Ω Co=0.1~0.2μF, 200W (400W)						

- 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) During operation it is available to change the rotating direction by turning the switch to CW or CCW.