

S.C. Brake Motor 90W (□90mm)

90W

Speed Control
Brake Motor
90W(□90mm)

Motor Specification

Model 9SBDG*-90F2□: Gear Type Shaft 9SBD*-90F2: D-Cut Type Shaft 9SBDK*-90F2: Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque		Permissible Torque				Capacitor μF / VAC
									1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
9SBDGA-90F2□	90	1∅110	60	4	30min.	90-1700	6.50	0.650	6.30	0.630	3.00	0.300	25.0 / 250
9SBDGD-90F2□	90	1∅220	60	4	30min.	90-1700	6.50	0.650	6.30	0.630	3.00	0.300	6.0 / 400
9SBDGE-90F2□	90	1∅220	50	4	30min.	90-1400	4.60	0.460	5.40	0.540	2.20	0.220	6.0 / 400
		1∅240					5.50	0.550	6.10	0.610	2.20	0.220	

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 are for attaching Gearbox and D-Cut & Key Type Shaft are for using motor only.

Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	2	3	3.6	5	6	7.5	9	12.5	15	18	20
9SBDG□ -90F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	10.5 1.02	15.7 1.54	18.8 1.84	26.1 2.56	31.4 3.07	39.2 3.84	47.1 4.61	59.1 5.79	70.9 6.95	85.1 8.33	85.7 8.40
			220	60	kgfcm N.m	10.5 1.02	15.7 1.54	18.8 1.84	26.1 2.56	31.4 3.07	39.2 3.84	47.1 4.61	59.1 5.79	70.9 6.95	85.1 8.33	85.7 8.40
			220/ 240	50	kgfcm N.m	10.1 0.99	15.2 1.49	18.2 1.79	25.3 2.48	30.4 2.98	38.0 3.72	45.6 4.47	57.2 5.60	68.6 6.73	82.4 8.07	83.0 8.13
		90	110	60	kgfcm N.m	5.0 0.49	7.5 0.73	9.0 0.88	12.5 1.22	14.9 1.46	18.7 1.83	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00
			220	60	kgfcm N.m	5.0 0.49	7.5 0.73	9.0 0.88	12.5 1.22	14.9 1.46	18.7 1.83	22.4 2.20	28.1 2.76	33.8 3.31	40.5 3.97	40.8 4.00
			220/ 240	50	kgfcm N.m	3.7 0.36	5.5 0.54	6.6 0.64	9.1 0.89	11.0 1.07	13.7 1.34	16.4 1.61	20.6 2.02	24.8 2.43	29.7 2.91	29.9 2.93

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	25	30	36	40	50	60	75	90	100	120	150	180	200		
9SBDG□ -90F2P	9PBK□BH 9PFK□BH	1200	110	60	kgfcm N.m	107.1 10.50	128.5 12.59	154.2 15.11	171.4 16.79	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	
			220	60	kgfcm N.m	107.1 10.50	128.5 12.59	154.2 15.11	171.4 16.79	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
			220/ 240	50	kgfcm N.m	103.7 10.16	124.4 12.20	149.3 14.63	165.9 16.26	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
		90	110	60	kgfcm N.m	51.0 5.00	61.2 6.00	73.4 7.20	81.6 8.00	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220	60	kgfcm N.m	51.0 5.00	61.2 6.00	73.4 7.20	81.6 8.00	102.0 10.00	122.4 12.00	137.3 13.45	164.7 16.14	183.0 17.93	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60
			220/ 240	50	kgfcm N.m	37.4 3.67	44.9 4.40	53.9 5.28	59.8 5.86	74.8 7.33	89.8 8.80	100.7 9.86	120.8 11.84	134.2 13.15	161.0 15.78	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60	200.0 19.60

B AC Motors

S.C. Brake Motor 90W (□90mm)

Max. Permissible Torque at Output Shaft of Gearbox

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180				
9SBDG□ -90F2H	9HBK□BH 9HFK□BH	1200	110	60	kgfcm	15.7	18.8	31.4	47.1	59.1	70.9	85.1	85.7	107.1	128.5	154.2	214.2	257.0	288.2	300.0	300.0	300.0	300.0	300.0	300.0			
					N.m	1.54	1.84	3.07	4.61	5.79	6.95	8.33	8.40	10.50	12.59	15.11	20.99	25.19	28.25	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	
			220	60	kgfcm	15.7	18.8	31.4	47.1	59.1	70.9	85.1	85.7	107.1	128.5	154.2	214.2	257.0	288.2	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	1.54	1.84	3.07	4.61	5.79	6.95	8.33	8.40	10.50	12.59	15.11	20.99	25.19	28.25	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
			220/240	50	kgfcm	15.2	18.2	30.4	45.6	57.2	68.6	82.4	83.0	103.7	124.4	149.3	207.4	248.9	279.1	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	1.49	1.79	2.98	4.47	5.60	6.73	8.07	8.13	10.16	12.20	14.63	20.33	24.39	27.35	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	90	110	60	kgfcm	7.5	9.0	14.9	22.4	28.1	33.8	40.5	40.8	51.0	61.2	73.4	102.0	122.4	137.3	164.7	183.0	219.6	274.5	300.0	300.0	300.0	300.0		
				N.m	0.73	0.88	1.46	2.20	2.76	3.31	3.97	4.00	5.00	6.00	7.20	10.00	12.00	13.45	16.14	17.93	21.52	26.90	29.40	29.40	29.40	29.40		
		220	60	kgfcm	7.5	9.0	14.9	22.4	28.1	33.8	40.5	40.8	51.0	61.2	73.4	102.0	122.4	137.3	164.7	183.0	219.6	274.5	300.0	300.0	300.0	300.0		
				N.m	0.73	0.88	1.46	2.20	2.76	3.31	3.97	4.00	5.00	6.00	7.20	10.00	12.00	13.45	16.14	17.93	21.52	26.90	29.40	29.40	29.40	29.40		
		220/240	50	kgfcm	5.5	6.6	11.0	16.4	20.6	24.8	29.7	29.9	37.4	44.9	53.9	74.8	89.8	100.7	120.8	134.2	161.0	201.3	241.6	241.6	241.6	241.6	241.6	
				N.m	0.54	0.64	1.07	1.61	2.02	2.43	2.91	2.93	3.67	4.40	5.28	7.33	8.80	9.86	11.84	13.15	15.78	19.73	23.67	23.67	23.67	23.67		

Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	10	12	15	18	25	30	36	50	60	
9SBDG□ -90F2W	9WD□BL/ □BR/□BRL	1200	110	60	kgfcm	51.7	60.5	72.8	83.9	110.3	124.7	145.2	142.9	122.4	
					N.m	5.06	5.93	7.13	8.22	10.80	12.22	14.22	14.00	12.00	
			220	60	kgfcm	51.7	60.5	72.8	83.9	110.3	124.7	145.2	142.9	122.4	122.4
					N.m	5.06	5.93	7.13	8.22	10.80	12.22	14.22	14.00	12.00	
			220/240	50	kgfcm	50.0	58.6	70.5	81.3	106.8	120.8	140.5	142.9	122.4	122.4
					N.m	4.90	5.74	6.90	7.96	10.46	11.84	13.77	14.00	12.00	
		90	110	60	kgfcm	24.6	28.8	34.7	40.0	52.5	59.4	69.1	90.0	99.0	99.0
					N.m	2.41	2.82	3.40	3.92	5.15	5.82	6.77	8.82	9.70	
			220	60	kgfcm	24.6	28.8	34.7	40.0	52.5	59.4	69.1	90.0	99.0	99.0
					N.m	2.41	2.82	3.40	3.92	5.15	5.82	6.77	8.82	9.70	
			220/240	50	kgfcm	18.0	21.1	25.4	29.3	38.5	43.6	50.7	66.0	72.6	7.11
					N.m	1.77	2.07	2.49	2.87	3.77	4.27	4.97	6.47	7.11	

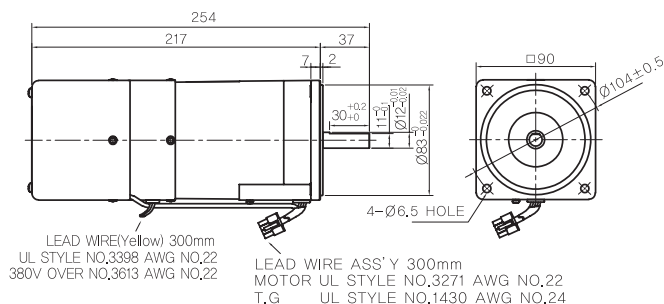
Motor Model	Gearbox Model	r/min	V	Hz	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80	
9SBDG□ -90F2WH	9WHD□-030	1200	110	60	kgfcm	39.7	51.0	71.8	90.7	104.0	121.0	148.7	170.1	163.3	132.7	
					N.m	3.89	5.00	7.04	8.89	10.19	11.85	14.57	16.67	16.00	13.00	
			220	60	kgfcm	39.7	51.0	71.8	90.7	104.0	121.0	148.7	170.1	163.3	132.7	132.7
					N.m	3.89	5.00	7.04	8.89	10.19	11.85	14.57	16.67	16.00	13.00	
			220/240	50	kgfcm	38.4	49.4	69.5	87.8	100.7	117.1	144.0	164.7	163.3	132.7	132.7
					N.m	3.77	4.84	6.81	8.61	9.86	11.48	14.11	16.14	16.00	13.00	
		90	110	60	kgfcm	18.9	24.3	34.2	43.2	49.5	57.6	70.8	81.0	90.0	105.6	105.6
					N.m	1.85	2.38	3.35	4.23	4.85	5.64	6.94	7.94	8.82	10.35	
			220	60	kgfcm	18.9	24.3	34.2	43.2	49.5	57.6	70.8	81.0	90.0	105.6	105.6
					N.m	1.85	2.38	3.35	4.23	4.85	5.64	6.94	7.94	8.82	10.35	
			220/240	50	kgfcm	13.9	17.8	25.1	31.7	36.3	42.2	51.9	59.4	66.0	77.4	7.59
					N.m	1.36	1.75	2.46	3.10	3.56	4.14	5.09	5.82	6.47	7.59	

- 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:
9SBD□-90F2 (POWERFUL FAN)



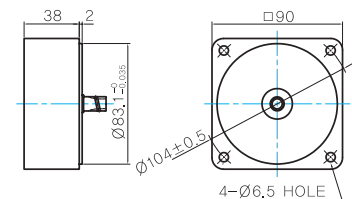
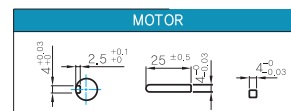
INTER-DECIMAL GEARBOX

- MODEL: 9XD10□□

MOTOR OUTPUT SHAFT

MODEL	SPEC
D-CUT TYPE	
9SBD□-90F2	
KEY TYPE	
9SBD□-90F2	

KEY SPEC

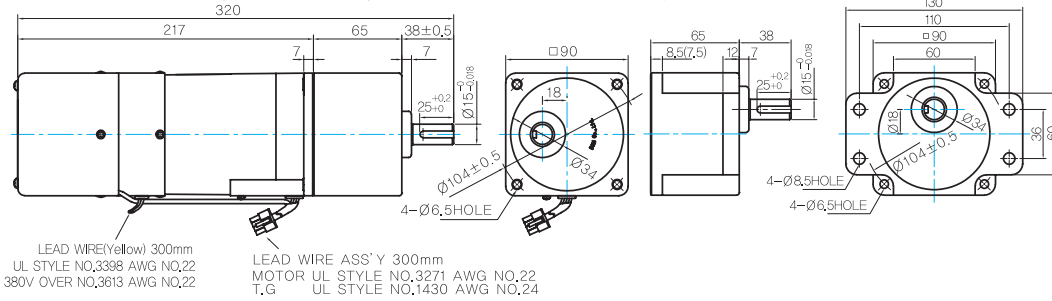


GEARED MOTOR

☉ P TYPE GEARBOX

- MOTOR MODEL:
9SBDG□-90F2P (POWERFUL FAN)

- GEARBOX MODEL:
9PBK□BH
- GEARBOX MODEL:
9PFK□BH



● GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9PBK□BH 9PFK□BH	

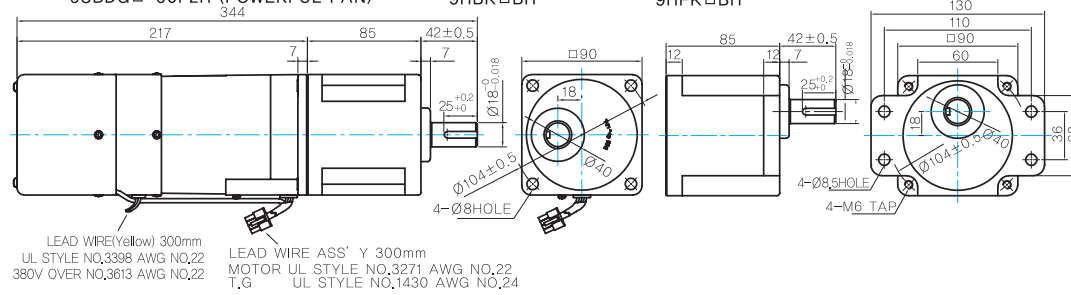
● KEY SPEC

GEARBOX	
$5^{+0.03}_{-0}$	$3^{+0.1}_{-0}$
25 ± 0.5	$5^{-0.03}_{-0}$

☉ H TYPE GEARBOX

- MOTOR MODEL:
9SBDG□-90F2H (POWERFUL FAN)

- GEARBOX MODEL:
9HBK□BH
- GEARBOX MODEL:
9HFK□BH



● GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9HBK□BH 9HFK□BH	

● KEY SPEC

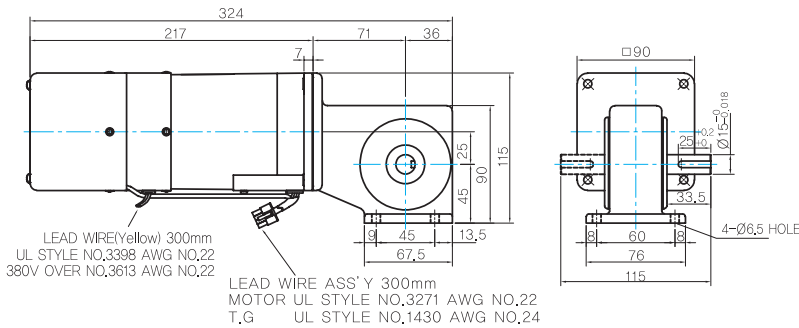
GEARBOX	
$5^{+0.03}_{-0}$	$3^{+0.1}_{-0}$
25 ± 0.5	$5^{-0.03}_{-0}$

☉ W TYPE GEARBOX

- MOTOR MODEL:
9SBDG□-90F2W (POWERFUL FAN)

- GEARBOX MODEL:
9WD□BL/BR/BRL

● KEY SPEC



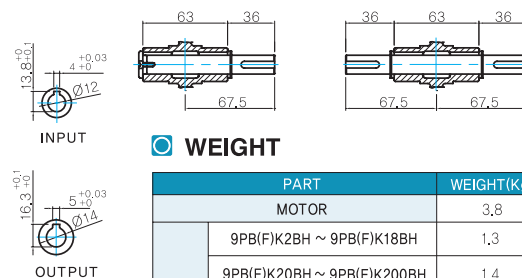
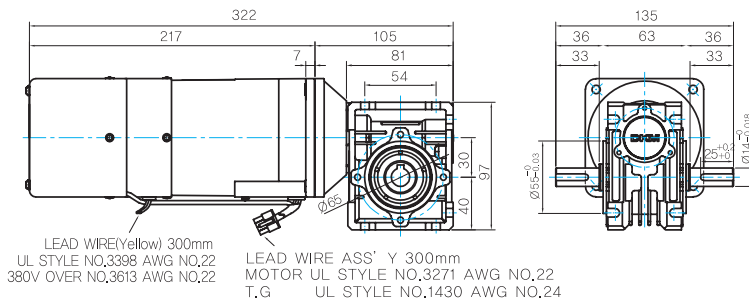
GEARBOX	
$5^{+0.03}_{-0}$	$3^{+0.1}_{-0}$
25 ± 0.5	$5^{-0.03}_{-0}$

☉ WH TYPE GEARBOX

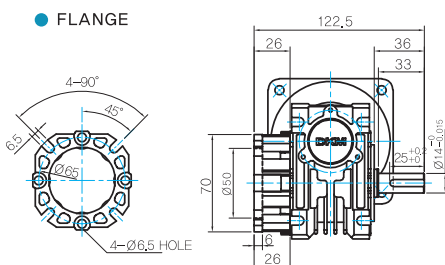
- MOTOR MODEL:
9SBDG□-90F2WH (POWERFUL FAN)

- GEARBOX MODEL:
9WHD□-030

- SHAFT(Unidirectional, Bi-directional)



● FLANGE



● KEY SPEC

GEARBOX	
$5^{+0.03}_{-0}$	$3^{+0.1}_{-0}$
25 ± 0.5	$5^{-0.03}_{-0}$

* The output flange and shafts are sold separately.

☉ WEIGHT

PART	WEIGHT(Kg)
MOTOR	3.8
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

B AC Motors

S.C. Brake Motor 90W (□90mm)

Motor Images

