180W 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 kgfcm	 N.m	Rated Load Speed r/min	 Current A	 Torque kgfcm	 N.m	Capacitor μF / VAC
9BDGD-180F□	180	1ø220	60	4	30min.	7.40	0.740	1550	1.60	11.40	1.140	8.0 / 450
9BDGE-180F□	180	1ø220	50	4	30min.	7.00	0.700	1250	1.50	14.00	1.400	8.0 / 450
		1ø240				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 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	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200
		r/min	600	500	300	200	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10	9
9BDG□ -180FH	9HBK□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
	9HFK□BH	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	Gearbox Model	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80	100
		r/min	240	180	120	90	72	60	45	36	30	22.5	18
9BDG□ -180FWH	9WHD□-030	kgfcm	69.3	89.1	125.4	158.4	181.5	204.1	183.7	173.5	163.3	132.7	–
		N.m	6.79	8.73	12.29	15.52	17.79	20.00	18.00	17.00	16.00	13.00	–
	9WHD□-040	kgfcm	–	–	–	–	–	–	–	265.0	300.0	295.0	270.0
		N.m	–	–	–	–	–	–	–	25.98	29.41	28.92	26.47

50Hz

Motor Model	Gearbox Model	Gear Ratio	3	3.6	6	9	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200
		r/min	500	417	250	167	120	100	83	75	60	50	42	30	25	20	17	15	13	10	8	7.5
9BDG□ -180FH	9HBK□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	300.0
	9HFK□BH	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	29.40

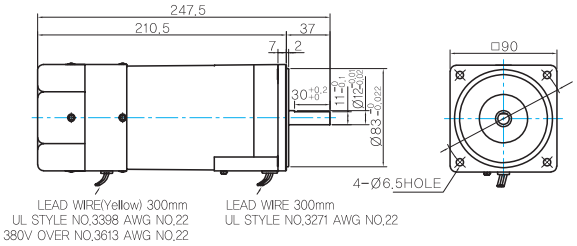
Motor Model	Gearbox Model	Gear Ratio	7.5	10	15	20	25	30	40	50	60	80	100
		r/min	200	150	100	75	60	50	37.5	30	25	18.75	15
9BDG□ -180FWH	9WHD□-030	kgfcm	88.2	113.4	159.6	183.7	214.3	204.1	183.7	173.5	163.3	132.7	–
		N.m	6.98	8.97	12.62	15.95	18.28	20.00	18.00	17.00	16.00	13.00	–
	9WHD□-040	kgfcm	–	–	–	–	–	–	–	340.0	330.0	295.0	270.0
		N.m	–	–	–	–	–	–	–	33.33	32.35	28.92	26.47

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.

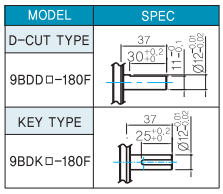
Dimensions

MOTOR ONLY

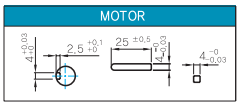
● MOTOR MODEL:
9BDD□-180F (GENERAL FAN)



● MOTOR OUTPUT SHAFT

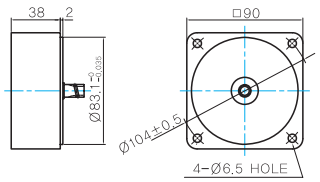
MODEL	SPEC
D-CUT TYPE 9BDD□-180F	
KEY TYPE 9BDK□-180F	

● KEY SPEC

MOTOR


INTER-DECIMAL GEARBOX

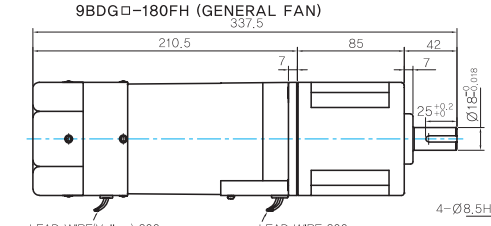
● MODEL:
9XD10□□



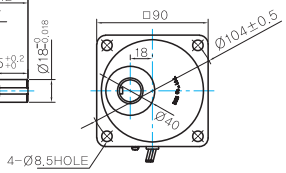
GEARED MOTOR

H TYPE GEARBOX

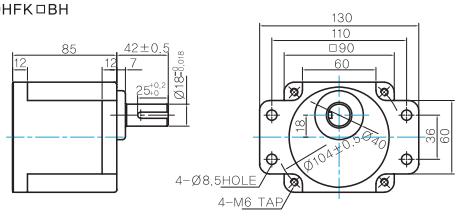
● MOTOR MODEL:
9BDG□-180FH (GENERAL FAN)



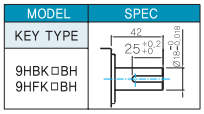
● GEARBOX MODEL:
9HBK□BH



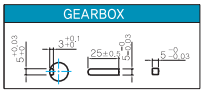
● GEARBOX MODEL:
9HFK□BH



● GEARBOX OUTPUT SHAFT

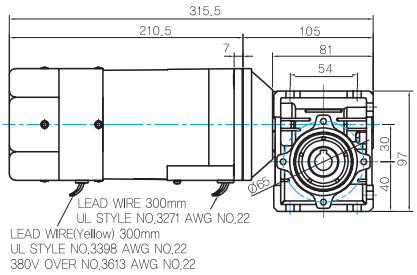
MODEL	SPEC
KEY TYPE 9HBK□BH 9HFK□BH	

● KEY SPEC

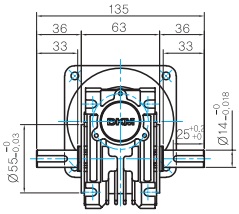
GEARBOX


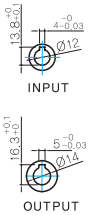
WH TYPE GEARBOX

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

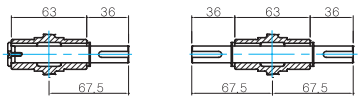


● GEARBOX MODEL:
9WHD□-030

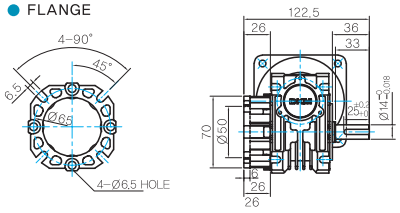




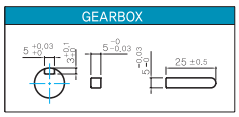
● SHAFT(Unidirectional, Bi-directional)



● FLANGE



● KEY SPEC

GEARBOX


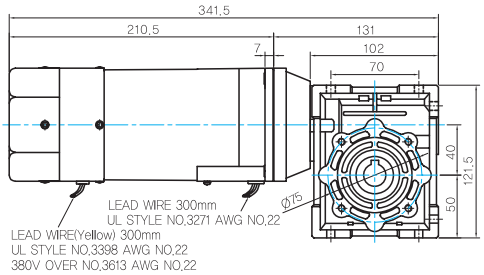
* The output flange and shafts are sold separately.

B AC Motors

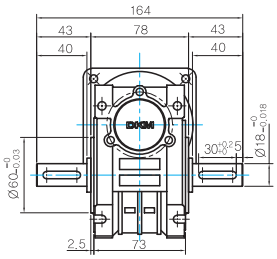
Brake Motor 180W (□90mm)

Dimensions

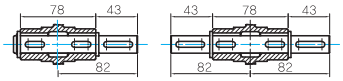
● MOTOR MODEL:
9BDG□-180FWH (GENERAL FAN)



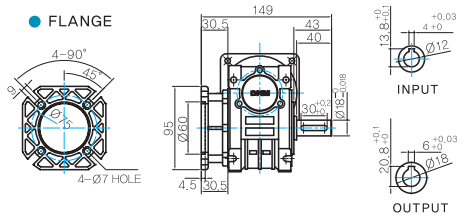
● GEARBOX MODEL:
9WHD□-040



● SHAFT(Unidirectional, Bi-directional)

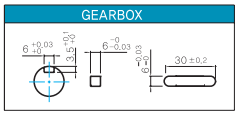


● FLANGE



● KEY SPEC

GEARBOX



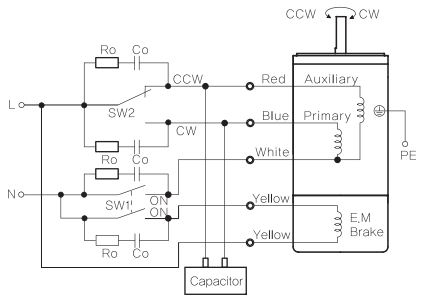
WEIGHT

PART		WEIGHT(Kg)
MOTOR		3.5
GEAR BOX	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
	9WHD□-030	1.13
	9WHD□-040	2.2
	9XD10□□	0.5

* The output flange and shafts are sold separately.

Connection Diagrams

Single Phase



* Rotation Direction:
To rotate the motor in a clockwise (CW) direction, turn SW2 to CW.
To rotate the motor in a counterclockwise (CCW) direction, turn SW2 to CCW.

Switch No.	Specifications		Note
	Single Phase 110V/115V Input	Single Phase 220V/230V Input	
SW1	AC 125V 3A minimum (Inductive load)	AC 250V 1.5A minimum (Inductive load)	Switched Simultaneously
SW2			–

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)]

Motor Images

9BDD□-180F

9BDG□-180FH+9HBK□BH

9BDG□-180FH+9HFK□BH

9BDG□-180FWH+9WHD□