

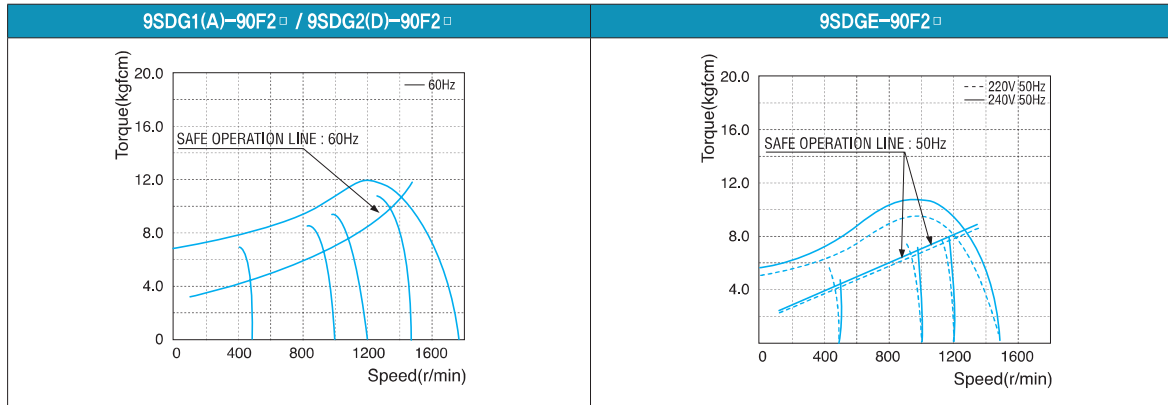
# 90W Speed Control Induction Motor 90W(□ 90mm)

## Motor 사양

Model 9SDG*-90F2□ : Gear Type Shaft 9SDD*-90F2 : D-Cut Type Shaft 9SDK*-60F2 : Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Speed Range r/min	Starting Torque		Permissible Torque				Capacitor μF / VAC
							kgfcm	N.m	1200r/min		90r/min		
									kgfcm	N.m	kgfcm	N.m	
9SDG1(A)-90F2□	90	1φ 110	60	4	Cont.	90-1700	4.50	0.450	6.30	0.630	2.30	0.230	20.0 / 250
9SDG2(D)-90F2□	90	1φ 220	60	4	Cont.	90-1700	4.50	0.450	6.30	0.630	2.30	0.230	6.0 / 450
9SDGE-90F2□	90	1φ 220	50	4	Cont.	90-1400	4.50	0.450	5.40	0.540	2.20	0.220	6.0 / 450
		1φ 240					5.00	0.500	6.10	0.610	2.30	0.230	

- 1) 모터 모델명 \* 자리에는 전압코드가, □ 안에는 부착되는 감속기의 모델 타입명이 들어갑니다.
- 2) 전압코드 A, D, E는 TP(Thermal Protector) 부착 사양입니다.
- 3) Gear Type Shaft는 감속기 부착용이며 D-Cut & Key Type Shaft는 모터 단독 사용시의 출력축입니다.

## 회전속도-토크 특성



## 감속기 부착 시 최대허용토크

Motor Model	Gear box Model	회전 속도 r/min	전압 V	주파수 Hz	감속비	2	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200					
9SDG*-90F2P	9PBK □ BH	1200	110	60	kgfcm	10.2	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0	124.7	149.7	166.3	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0				
					N.m	1.00	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19	12.22	14.67	16.30	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60		
		9PFK □ BH			90	110	60	kgfcm	8.7	13.1	15.7	21.9	26.2	32.8	39.4	43.7	49.3	59.1	71.0	78.8	89.1	106.9	128.3	142.6	178.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
								N.m	0.86	1.29	1.54	2.14	2.57	3.21	3.86	4.29	4.83	5.79	6.95	7.73	8.73	10.48	12.57	13.97	17.46	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
		90			110	60	60	kgfcm	3.7	5.6	6.7	9.3	11.2	14.0	16.8	18.6	21.0	25.2	30.2	33.6	38.0	45.5	54.6	60.7	75.9	91.1	101.8	122.1	135.7	162.8	200.0	200.0	200.0	200.0	200.0
								N.m	0.37	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.06	2.47	2.96	3.29	3.72	4.46	5.36	5.95	7.44	8.93	9.97	11.97	13.30	15.96	19.60	19.60	19.60	19.60	19.60
	220/240		50	50	kgfcm	3.6	5.3	6.4	8.9	10.7	13.4	16.0	17.8	20.1	24.1	28.9	32.1	36.3	43.6	52.3	58.1	72.6	87.1	97.4	116.8	129.8	155.8	194.7	200.0	200.0	200.0	200.0			
					N.m	0.35	0.52	0.63	0.87	1.05	1.31	1.57	1.75	1.97	2.36	2.83	3.15	3.56	4.27	5.12	5.69	7.11	8.54	9.54	11.45	12.72	15.26	19.08	19.60	19.60	19.60	19.60			

- 1) 모터 모델명 \* 자리에는 전압코드가 들어갑니다.
- 2) 감속기 모델명 □ 안에는 감속비가 들어갑니다.
- 3) 위의 표에서 색깔된 범위의 감속비를 선택했을 때 감속기의 출력축은 모터의 출력축과 같은 방향으로 회전합니다. 흰색 바탕 범위의 감속비에서는 감속기 출력축은 모터 출력축의 회전방향과 반대방향으로 회전합니다.
- 4) 회전속도(r/min)는 모터의 동기회전속도(50Hz:1500r/min, 60Hz:1800r/min)를 감속비로 나누어 계산합니다. 실제 회전속도는 부하의 크기에 따라 표시보다 2~20% 정도 느립니다.

# B AC Motors

## S.C. Induction Motor 90W (□ 90mm)

Motor Model	Gear box Model	회전속도 r/min	전압 V	주파수 Hz	감속비	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25
9SDG*~90F2H	9HBK □ BH 9HFK □ BH	1200	110	60	kgfcm	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0
					N.m	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19
					kgfcm	15.3	18.4	25.5	30.6	38.3	45.9	51.0	57.5	69.0	82.8	92.0	104.0
		N.m	1.50	1.80	2.50	3.00	3.75	4.50	5.00	5.63	6.76	8.11	9.01	10.19			
		90	110	60	kgfcm	13.1	15.7	21.9	26.2	32.8	39.4	43.7	49.3	59.1	71.0	78.8	89.1
					N.m	1.29	1.54	2.14	2.57	3.21	3.86	4.29	4.83	5.79	6.95	7.73	8.73
kgfcm	5.6				6.7	9.3	11.2	14.0	16.8	18.6	21.0	25.2	30.2	33.6	38.0		
N.m	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.06	2.47	2.96	3.29	3.72					
90	220	60	kgfcm	5.6	6.7	9.3	11.2	14.0	16.8	18.6	21.0	25.2	30.2	33.6	38.0		
			N.m	0.55	0.66	0.91	1.10	1.37	1.64	1.83	2.06	2.47	2.96	3.29	3.72		
			kgfcm	5.3	6.4	8.9	10.7	13.4	16.0	17.8	20.1	24.1	28.9	32.1	36.3		
N.m	0.52	0.63	0.87	1.05	1.31	1.57	1.75	1.97	2.36	2.83	3.15	3.56					

Motor Model	Gear box Model	회전속도 r/min	전압 V	주파수 Hz	감속비	30	36	40	50	60	75	90	100	120	150	180	200
9SDG*~90F2H	9HBK □ BH 9HFK □ BH	1200	110	60	kgfcm	124.7	149.7	166.3	207.9	249.5	278.8	300.0	300.0	300.0	300.0	300.0	300.0
					N.m	12.22	14.67	16.30	20.37	24.45	27.32	29.40	29.40	29.40	29.40	29.40	29.40
					kgfcm	124.7	149.7	166.3	207.9	249.5	278.8	300.0	300.0	300.0	300.0	300.0	300.0
		N.m	12.22	14.67	16.30	20.37	24.45	27.32	29.40	29.40	29.40	29.40	29.40	29.40			
		90	110	60	kgfcm	106.9	128.3	142.6	178.2	213.8	239.0	286.7	300.0	300.0	300.0	300.0	
					N.m	10.48	12.57	13.97	17.46	20.96	23.42	28.10	29.40	29.40	29.40	29.40	
kgfcm	45.5				54.6	60.7	75.9	91.1	101.8	122.1	135.7	162.8	203.6	244.3			
N.m	4.46	5.36	5.95	7.44	8.93	9.97	11.97	13.30	15.96	19.95	23.94						
90	220	60	kgfcm	45.5	54.6	60.7	75.9	91.1	101.8	122.1	135.7	162.8	203.6	244.3			
			N.m	4.46	5.36	5.95	7.44	8.93	9.97	11.97	13.30	15.96	19.95	23.94			
			kgfcm	43.6	52.3	58.1	72.6	87.1	97.4	116.8	129.8	155.8	194.7	233.6			
N.m	4.27	5.12	5.69	7.11	8.54	9.54	11.45	12.72	15.26	19.08	22.90						

Motor Model	Gearbox Model	회전속도 r/min	전압 V	주파수 Hz	감속비	10	12	15	18	25	30	36	50	60
9SDG*~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
					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			
		90	110	60	kgfcm	50.0	58.6	70.5	81.3	106.8	120.8	140.5	142.9	122.4
					N.m	4.90	5.74	6.90	7.96	10.46	11.84	13.77	14.00	12.00
kgfcm	18.9				22.1	26.6	30.6	40.3	45.5	53.0	69.0	75.9		
N.m	1.85	2.16	2.60	3.00	3.94	4.46	5.19	6.76	7.44					
90	220	60	kgfcm	18.9	22.1	26.6	30.6	40.3	45.5	53.0	69.0	75.9		
			N.m	1.85	2.16	2.60	3.00	3.94	4.46	5.19	6.76	7.44		
			kgfcm	18.9	22.1	26.6	30.6	40.3	45.5	53.0	69.0	75.9		
N.m	1.85	2.16	2.60	3.00	3.94	4.46	5.19	6.76	7.44					

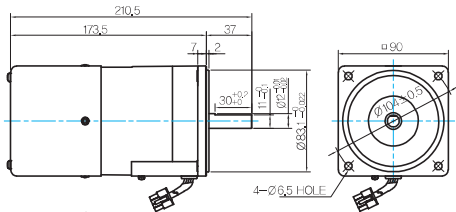
Motor Model	Gearbox Model	회전속도 r/min	전압 V	주파수 Hz	감속비	5	7.5	10	15	20	25	30	40	50	60	80
9SDG*~90F2WH	9WHD □ -030	1200	110	60	kgfcm	21.9	31.8	40.8	57.5	72.6	83.2	96.8	118.9	136.1	151.2	132.7
					N.m	2.15	3.11	4.00	5.63	7.11	8.15	9.48	11.66	13.34	14.82	13.00
					kgfcm	21.9	31.8	40.8	57.5	72.6	83.2	96.8	118.9	136.1	151.2	132.7
		N.m	2.15	3.11	4.00	5.63	7.11	8.15	9.48	11.66	13.34	14.82	13.00			
		90	110	60	kgfcm	21.2	30.7	39.5	55.6	70.3	80.5	93.7	115.2	131.8	146.4	132.7
					N.m	2.08	3.01	3.87	5.45	6.89	7.89	9.18	11.29	12.91	14.35	13.00
kgfcm	8.0				11.6	14.9	21.0	26.5	30.4	35.3	43.4	49.7	55.2	64.8		
N.m	0.78	1.14	1.46	2.06	2.60	2.98	3.46	4.26	4.87	5.41	6.35					
90	220	60	kgfcm	8.0	11.6	14.9	21.0	26.5	30.4	35.3	43.4	49.7	55.2	64.8		
			N.m	0.78	1.14	1.46	2.06	2.60	2.98	3.46	4.26	4.87	5.41	6.35		
			kgfcm	8.0	11.6	14.9	21.0	26.5	30.4	35.3	43.4	49.7	55.2	64.8		
N.m	0.78	1.14	1.46	2.06	2.60	2.98	3.46	4.26	4.87	5.41	6.35					

Motor Model	Gearbox Model	회전속도 r/min	전압 V	주파수 Hz	감속비	15	20	25	30	40	50	60	80	100	120	160	200	225	240
9SDG*~90F2HC	9HC □ □	1200	110	60	kgfcm	69	92	115	138	184	230	276	368	460	552	736	920	1035	1104
					N.m	6.76	9.02	11.3	13.5	18	22.5	27	36.1	45.1	54.1	72.1	90.2	101	108
					kgfcm	69	92	115	138	184	230	276	368	460	552	736	920	1035	1104
		N.m	6.76	9.02	11.3	13.5	18	22.5	27	36.1	45.1	54.1	72.1	90.2	101	108			
		90	110	60	kgfcm	59.1	78.8	98.6	118	158	197	237	315	394	473	631	788	887	946
					N.m	5.79	7.72	9.66	11.6	15.5	19.3	23.2	30.9	38.6	46.4	61.8	77.1	86.9	92.7
kgfcm	25.2				33.6	42	50.4	67.2	84	101	134	168	201	269	336	378	403		
N.m	2.47	3.29	4.12	4.94	6.59	8.23	9.9	13.1	16.5	19.7	26.4	32.9	37	39.5					
90	220	60	kgfcm	25.2	33.6	42	50.4	67.2	84	101	134	168	201	269	336	378	403		
			N.m	2.47	3.29	4.12	4.94	6.59	8.23	9.9	13.1	16.5	19.7	26.4	32.9	37	39.5		
			kgfcm	24.1	32.1	40.2	48.2	64.2	80.3	96.4	128	161	193	257	321	361			
N.m	2.36	3.15	3.94	4.72	6.29	7.87	9.45	12.5	15.8	18.9	25.2	31.5	35.4						

## Dimensions

### MOTOR ONLY

- MOTOR MODEL:  
9SDD□-90F2 (POWERFUL FAN)

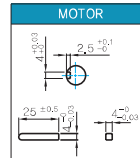


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1007 AWG No.22

### MOTOR OUTPUT SHAFT

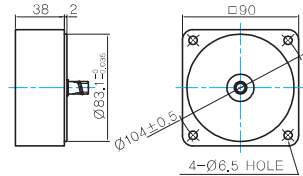
MODEL	SPEC
D-CUT TYPE	
KEY TYPE	
9SDD□-90F2	
9SDK□-90F2	

### KEY SPEC



### 중간감속기

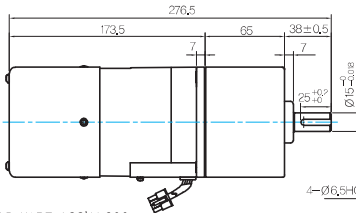
- MODEL: 9XD10□□



### GEARED MOTOR

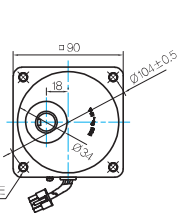
#### P TYPE GEARBOX

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

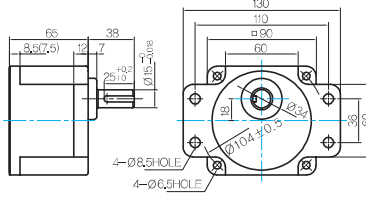


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9PBK□BH



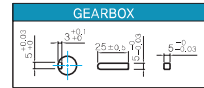
- GEARBOX MODEL:  
9PFK□BH



### GEARBOX OUTPUT SHAFT

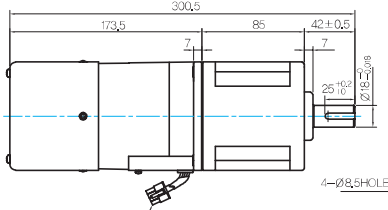
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

### KEY SPEC



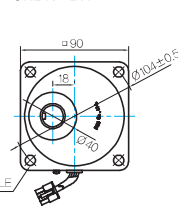
#### H TYPE GEARBOX

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

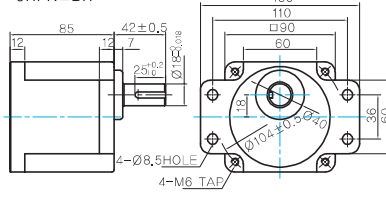


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9HBK□BH



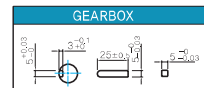
- GEARBOX MODEL:  
9HFK□BH



### GEARBOX OUTPUT SHAFT

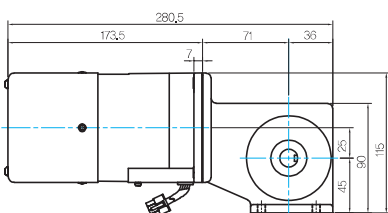
MODEL	SPEC
KEY TYPE	
9HBK□BH	
9HFK□BH	

### KEY SPEC



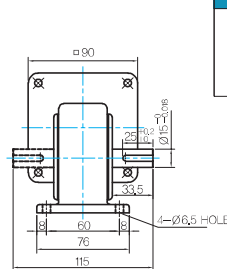
#### W TYPE GEARBOX

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

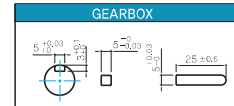


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG No.20  
T,G UL STYLE NO.1007 AWG No.22

- GEARBOX MODEL:  
9WD□BL/BR/BRL



### KEY SPEC

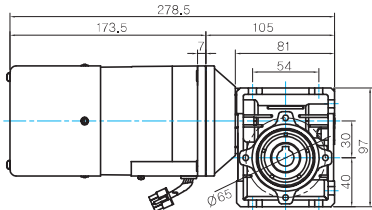


# B AC Motors

## S.C. Induction Motor 90W (□ 90mm)

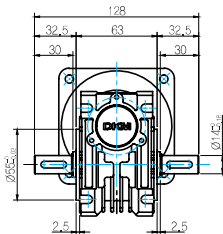
### WH TYPE GEARBOX

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

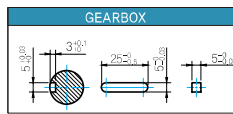


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22

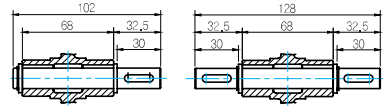
● GEARBOX MODEL :  
9WHD□-030



● KEY SPEC



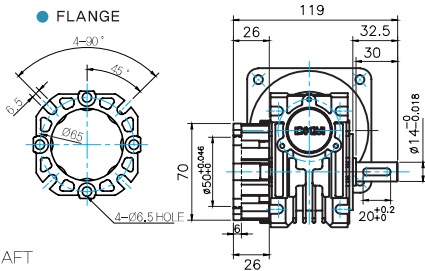
● SHAFT



한방향

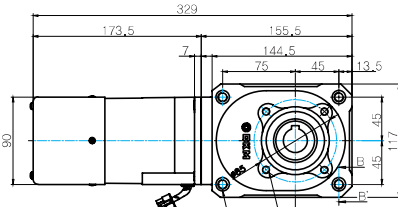
양방향

● FLANGE



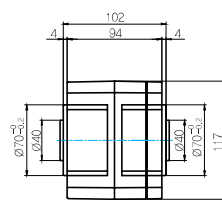
### HC TYPE GEARBOX

● MOTOR MODEL :  
9SDG□-90F2HC□ (POWERFUL FAN)

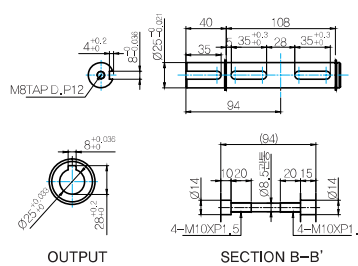


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22  
4-M8TAP D,P10  
4-Ø8.5 HOLE C,B14  
4-M10TAP D,P20

● GEARBOX MODEL :  
9HC(15 ~ 60)□



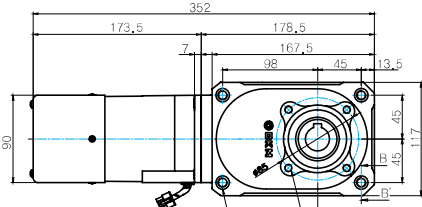
● SHAFT



OUTPUT

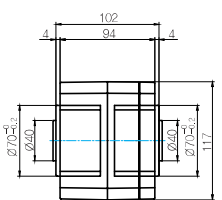
SECTION B-B'

● MOTOR MODEL :  
9SDG□-90F2HC□ (POWERFUL FAN)

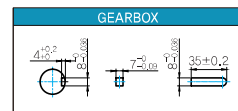


LEAD WIRE ASS'Y 300mm  
MOTOR UL STYLE NO.3271 AWG NO.20  
T,G UL STYLE NO.1007 AWG No.22  
4-M8TAP D,P10  
4-Ø8.5 HOLE C,B14  
4-M10TAP D,P20

● GEARBOX MODEL :  
9HC(80 ~ 240)□



● KEY SPEC



### WEIGHT

PART	WEIGHT(Kg)
MOTOR	3,50
9PB(F)K2BH - 9PB(F)K10BH	1,28
9PB(F)K12.5BH - 9PB(F)K20BH	1,3
9PB(F)K25BH - 9PB(F)K60BH	1,45
9PB(F)K75BH - 9PB(F)K200BH	1,47
9HB(F)K3BH - 9HB(F)K10BH	1,62
9HB(F)K12.5BH - 9HB(F)K20BH	1,68
9HB(F)K25BH - 9HB(F)K60BH	1,73
9HB(F)K75BH - 9HB(F)K200BH	1,78
9WD□BL/BR/BRL	1,0
9WHD□-030	1,2
9HC15□	4,05
9HC20□~9HC60□	4,1
9HC80□~9HC240□	4,75
9XD10□	0,6

\* 출력 FLANGE와 SHAFT는 별매입니다.

### Motor Images

