

120W

Brake Motor 120W(□ 90mm)

Motor 사양

Model 9BDG*~120F□ : Gear Type Shaft 9BDD*~120F : D-Cut Type Shaft 9BDK*~120F : Key Type Shaft	Output W	Voltage V	Frequency Hz	Poles	Duty	Starting Torque kgfcm N.m	Rated Load			Capacitor μF / VAC
							Speed r/min	Current A	Torque kgfcm N.m	
Lead Wire Type										
9BD◇1(A)~120F□	120	1φ 110	60	4	30min.	7.11 0.711	1550	2.50	7.54 0.754	30.0 / 250
9BD◇2(D)~120F□	120	1φ 220	60	4	30min.	6.42 0.642	1600	1.08	7.31 0.731	6.5 / 450
9BD◇E~120F□	120	1φ 220	50	4	30min.	6.28 0.628	1250	1.10	9.35 0.935	6.5 / 450
		1φ 240				7.50 0.750		1.21	9.35 0.935	
9BD◇3(G)~120F□	120	3φ 220	50	4	Cont.	24.40 2.440	1300	0.88	8.99 0.899	-
			60			20.00 2.000	1600	0.71	7.31 0.731	
		3φ 230	50	4	Cont.	27.00 2.700	1350	0.86	8.66 0.866	
			60			21.70 2.170	1600	0.76	7.31 0.731	
9BD◇4(K)~120F□	120	3φ 380	50	4	Cont.	24.30 2.430	1300	0.50	8.99 0.899	-
			60			19.90 1.990	1600	0.41	7.31 0.731	
		3φ 400	50	4	Cont.	27.10 2.710	1350	0.49	8.66 0.866	
			60			21.90 2.190	1600	0.43	7.31 0.731	
9BD◇5(L)~120F□	120	3φ 415	50	4	Cont.	24.30 2.430	1300	0.47	8.99 0.899	-
			60			19.90 1.990	1600	0.37	7.31 0.731	
		3φ 440	50	4	Cont.	27.50 2.750	1350	0.47	8.66 0.866	
			60			22.20 2.220	1600	0.40	7.31 0.731	

1) 모터 모델명 * 자리에는 전압코드가 들어갑니다. 2) 모터 모델명 ◇ 자리에는 모터 출력축 타입명이 들어갑니다. (G: Gear Type / D: D-Cut Type / K: Key Type) Gear Type Shaft는 감속기 부착 용이며 D-Cut 및 Key Type Shaft는 모터 단독 사용 시의 출력축입니다. 3) 모터 출력축 타입이 Gear Type일 경우, □ 안에는 부착되는 감속기의 모델 타입명이 들어갑니다. 4) 전압코드 A, D, E, G, K, L은 TP(Thermal Protector) 부착 사양입니다. 5) 상상 380V~440V 모터에서는 인버터를 사용할 수 없습니다. 인버터 사용 시 권선의 절연이 열화되어 모터가 파손될 수 있습니다.

감속기 부착 시 최대허용토크

60Hz

Motor Model	Gearbox Model	감속비 r/min	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
9BDG*~120FP	9PBK □ BH 9PFC □ BH	kgfcm N.m	11.8 1.16	17.8 1.74	21.3 2.09	29.6 2.90	35.5 3.48	44.4 4.35	53.3 5.22	59.2 5.80	66.7 6.53	80.0 7.84	96.0 9.41	106.7 10.45	120.5 11.81	144.6 14.17	173.6 17.01	192.9 18.90	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	
9BDG*~120FH	9HBK □ BH 9HFK □ BH	kgfcm N.m	- 1.74	17.8 2.09	21.3 2.90	29.6 2.90	35.5 3.48	44.4 4.35	53.3 5.22	59.2 5.80	66.7 6.53	80.0 7.84	96.0 9.41	106.7 10.45	120.5 11.81	144.6 14.17	173.6 17.01	192.9 18.90	241.1 23.62	289.3 28.35	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	감속비 r/min	10	12	15	18	25	30	36	50	60	Motor Model	Gearbox Model	감속비 r/min	5	7.5	10	15	20	25	30	40	50	60	80
9BDG*~120FW	9WD □ BL/ □ BR/ □ BRL	kgfcm N.m	59.9 5.87	70.1 6.87	84.4 8.27	97.3 9.54	127.8 12.53	144.6 14.17	153.1 15.00	142.9 14.00	122.4 12.00	9BDG*~120FWH	9WHD □ -030	kgfcm N.m	25.4 2.49	36.8 3.61	47.3 4.64	66.6 6.53	84.2 8.25	96.4 9.45	112.2 11.00	137.9 13.52	157.8 15.46	163.3 16.00	132.7 13.00

Motor Model	Gearbox Model	감속비 r/min	15	20	25	30	40	50	60	80	100	120	160	200	225	240
9BDG*~120FHC	9HC □ - ◇	kgfcm N.m	80.0 7.84	106.7 10.45	133.3 13.06	160.0 15.68	213.3 20.90	266.6 26.13	320.0 31.36	426.6 41.81	533.3 52.26	639.9 62.71	853.2 83.62	1066.5 104.52	1199.8 117.58	1279.8 125.42

50Hz

Motor Model	Gearbox Model	감속비 r/min	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
9BDG*~120FP	9PBK □ BH 9PFK □ BH	kgfcm N.m	14.0 1.37	21.0 2.06	25.2 2.47	35.1 3.44	42.1 4.12	52.6 5.15	63.1 6.19	70.1 6.87	79.0 7.74	94.8 9.29	113.8 11.15	126.4 12.39	142.9 14.00	171.4 16.80	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
9BDG*~120FH	9HBK □ BH 9HFK □ BH	kgfcm N.m	- 2.06	21.0 2.06	25.2 2.47	35.1 3.44	42.1 4.12	52.6 5.15	63.1 6.19	70.1 6.87	79.0 7.74	94.8 9.29	113.8 11.15	126.4 12.39	142.9 14.00	171.4 16.80	205.7 20.16	228.6 22.40	285.7 28.00	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

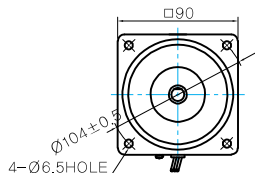
Motor Model	Gearbox Model	감속비 r/min	10	12	15	18	25	30	36	50	60	Motor Model	Gearbox Model	감속비 r/min	5	7.5	10	15	20	25	30	40	50	60	80
9BDG*~120FHC	9WD □ BL/ □ BR/ □ BRL	kgfcm N.m	71.0 6.96	83.1 8.15	100.0 9.80	115.3 11.30	151.5 14.85	170.0 16.66	153.1 15.00	142.9 14.00	122.4 12.00	9BDG*~120FWH	9WHD □ -030	kgfcm N.m	30.1 2.95	43.6 4.28	56.1 5.50	79.0 7.74	99.7 9.77	114.3 11.20	133.0 13.03	163.5 16.02	173.5 17.00	163.3 16.00	132.7 13.00

Motor Model	Gearbox Model	감속비 r/min	15	20	25	30	40	50	60	80	100	120	160	200	225	240
9BDG*~120FHC	9HC □ - ◇	kgfcm N.m	94.8 9.29	126.4 12.39	158.0 15.48	189.6 18.58	252.8 24.78	316.0 30.97	379.2 37.16	505.6 49.55	632.0 61.94	758.4 74.33	1011.2 99.10	1264.0 123.88	1422.0 139.36	1516.8 148.65

1) 모터 모델명 * 자리에는 전압코드가 들어갑니다. 2) 감속기 모델명 □ 안에는 감속비, ◇ 안에는 출력축 재질이 들어갑니다. 3) 위의 표에서 색칠된 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.

Dimensions

● MOTOR MODEL:
9BD□□-120F (GENERAL FAN)

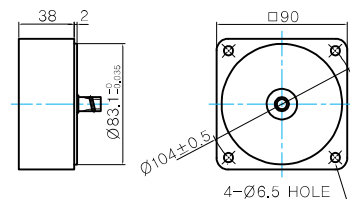


MODEL	SPEC
D-CUT TYPE	
9BDD□-120F	
KEY TYPE	
9BDK□-120F	

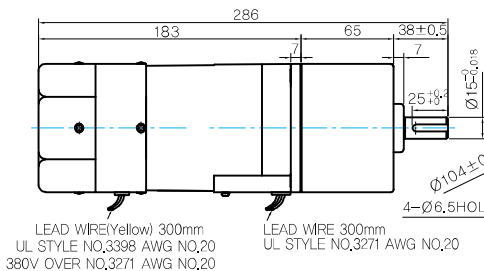
Technical drawing of a motor assembly. The drawing includes a side view of a motor with a circular base and a rectangular body, and a cross-sectional view of the base. Dimensions and tolerances are specified as follows:

- Motor body length: 25 ± 0.5
- Motor body diameter: $\varnothing 4 \pm 0.03$
- Base diameter: 4 ± 0.03
- Base thickness: 4 ± 0.03
- Distance from base center to motor body center: 2.5 ± 0.1

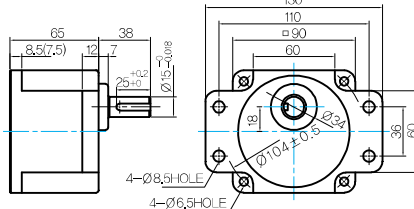
● MODEL:
9XD10□□



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



● GEARBOX MODEL:
9PBK□BH



- GEARBOX OUTPUT SHAFT

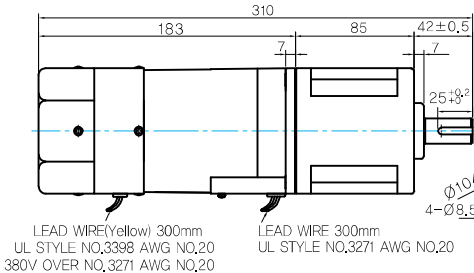
MODEL	SPEC
KEY TYPE	
9PBK□BH	
9PFK□BH	

● KEY SPEC

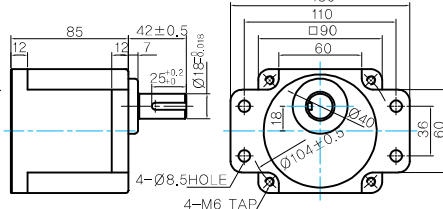
GEARBOX

The drawing shows four components of a gearbox assembly. From left to right: 1. A shaft with a diameter of $5^{+0.03}_0$. 2. A gear with a pitch diameter of $3^{+0.1}_0$. 3. A housing with a bore diameter of $25^{+0.5}_0$ and a shaft diameter of $5^{+0.03}_0$. 4. A pin with a diameter of $5^{+0.03}_0$.

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



● GEARBOX MODEL:
9HBK□BH



- GEARBOX OUTPUT SHAFT

MODEL	SPEC
KEY TYPE	
9HBK□BH 9HFK□BH	

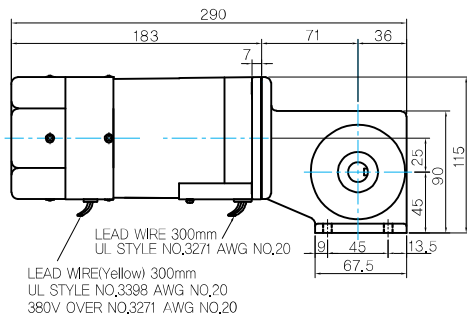
● KEY SPEC

GEARBOX

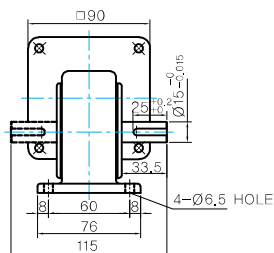
Technical drawing of a gearbox assembly showing four components with their dimensions and tolerances:

- Component 1: Dimension $5^{+0.03}_{+0}$
- Component 2: Dimension $3^{+0.1}_{+0}$
- Component 3: Dimension $25^{+0.5}_{+0}$
- Component 4: Dimension $5^{+0.03}_{-0}$

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



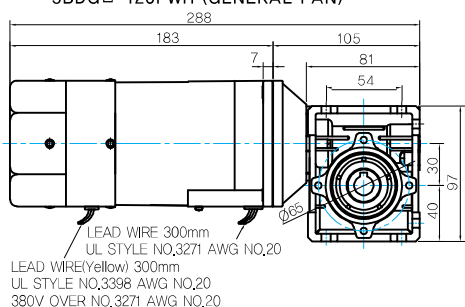
● GEARBOX MODEL:
9WD□BL/BR/BRL



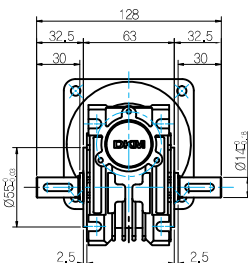
● KEY SPEC

WH TYPE GEARBOX

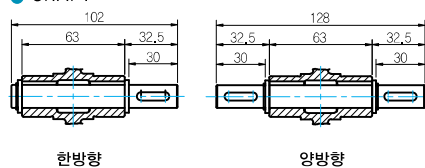
- MOTOR MODEL :
9BDG□-120FWH (GENERAL FAN)



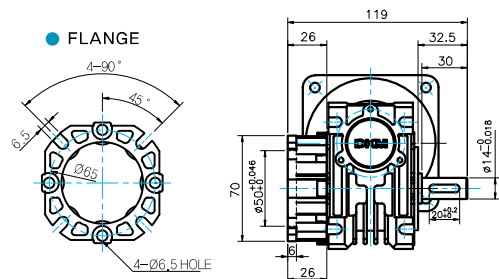
- GEARBOX MODEL:
9WHD□-030



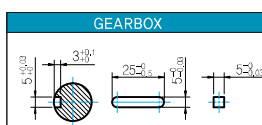
- SHAFT



- FLANGE

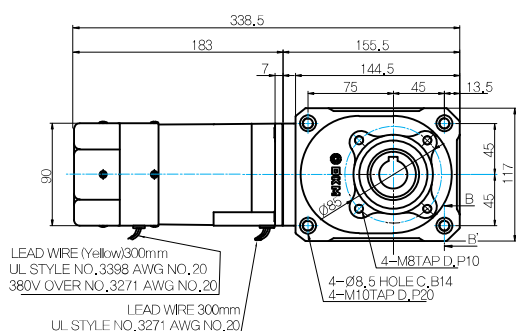


- KEY SPEC

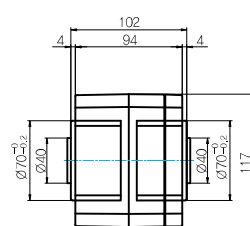


HC TYPE GEARBOX

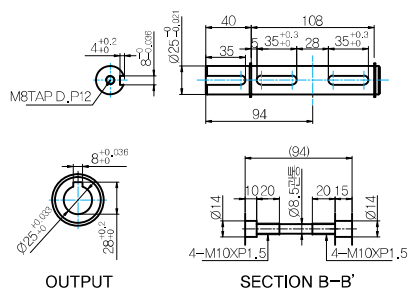
- MOTOR MODEL :
9BDG□-120FHC (GENERAL FAN)



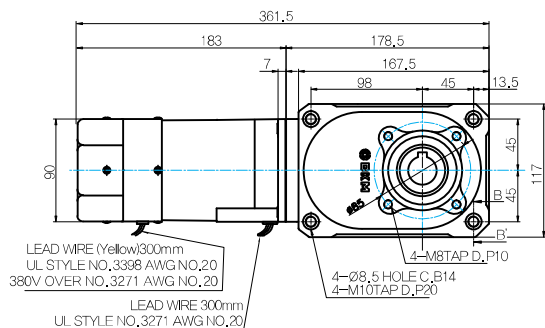
- GEARBOX MODEL:
9HC(15 ~ 60) □



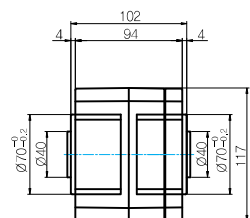
- SHAFT



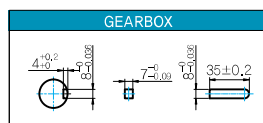
- MOTOR MODEL :
9BDG□-120FHC (GENERAL FAN)



- GEARBOX MODEL :
9HC(80 ~ 240) □



- KEY SPEC



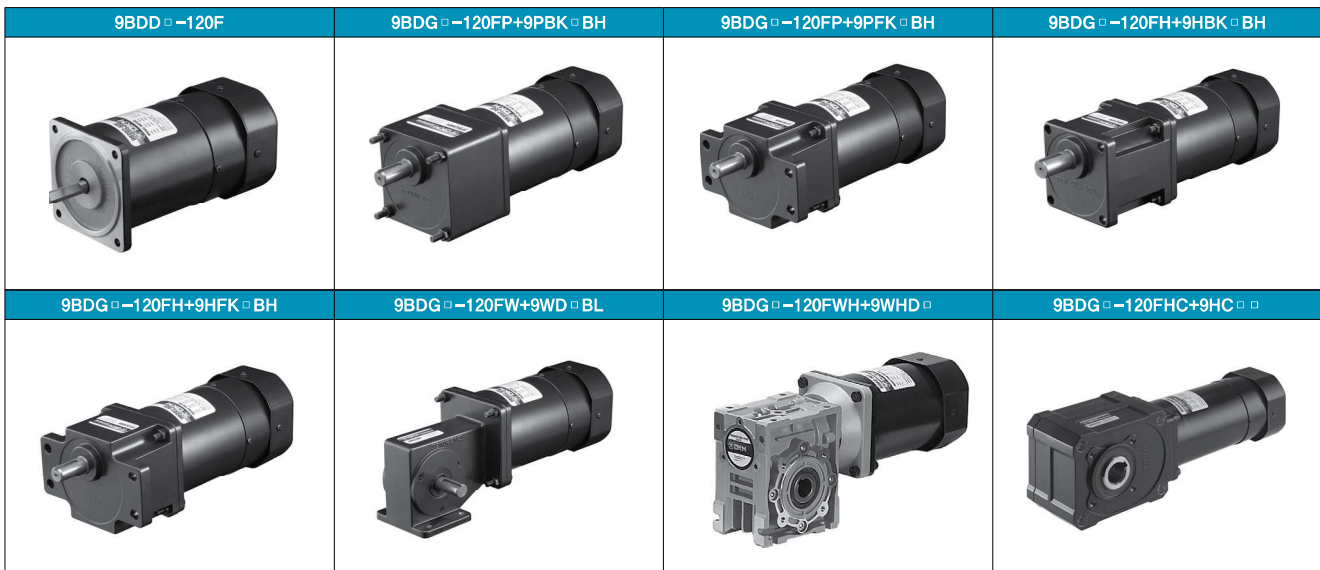
WEIGHT

PART	WEIGHT(kg)
MOTOR	3.70
9PB(F)K2BH - 9PB(F)K10BH	1.28
9PB(F)K12.5BH - 9PB(F)K20BH	1.30
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	1.00
9WHD□-030	1.20
9HC15-◇	4.05
9HC20-◇ - 9HC60-◇	4.10
9HC80-◇ - 9HC240-◇	4.75
9XD10□○	0.60

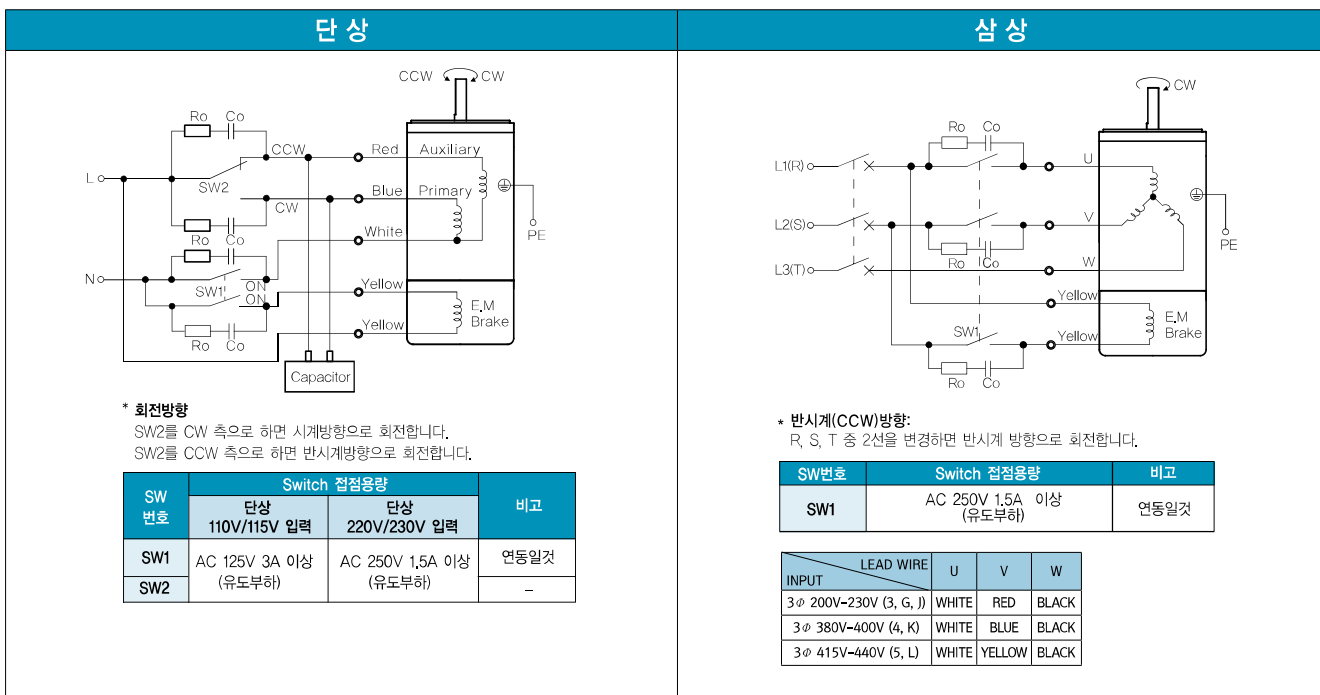
*출력 FLANGE와 SHAFT는 별매입니다.

Brake Motor 120W (□ 90mm)

Motor Images



결선도



- 1) SW1은 모터의 운전/정지와 전자브레이크 조작용입니다. (연동) 2) SW1을 ON으로 하면 브레이크는 해제되고 모터가 회전하며, OFF로 할 경우 모터는 정지하며 브레이크가 작동합니다.
- 3) 모터가 정지한 상태에서 브레이크를 해제할 때에는 SW1을 비연동으로 하고 노란색 리드선 측 스위치만 ON으로 합니다.
- 4) Ro, Co는 Surge 전압 흡수용 CR회로입니다. [Ro=5~200Ω, Co=0.1~0.2μF, 200WV (400WV)]
- 5) 인버터 사용시 브레이크 전원은 별도로 사용해주시기 바랍니다. 인버터 출력전원 사용시 운전주파수에 따라 브레이크 동작전원이 정상적으로 공급되지 않을 수 있습니다.