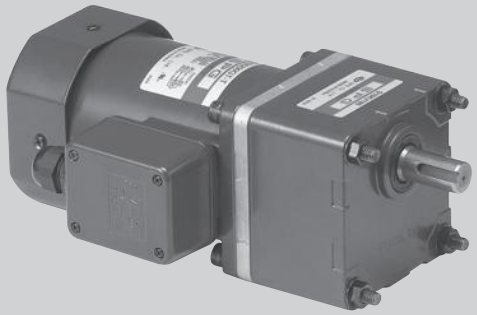


200W

□104 MOTOR & GEAR HEAD

□104 MOTOR & GEAR HEAD 특징 (Characteristics of 104 MOTOR & GEAR HEAD)

- 기존 90각 GEAR HEAD 대비 고출력, 고강도 적용 가능 (Large output and high strength applicable) : 최대 허용 TORQUE 400 kgf · ㎝, 고강도 BALL BEARING, NEEDLE BEARING 적용 (Maximum Permissible TORQUE is 400 kgf · cm, It is applied to BALL BEARING, NEEDLE BEARING of high strength.)
- GEAR BOX 정밀 가공을 통해 강도 및 소음을 개선하였습니다. (Improvement of strength and noise through precise processing of GEAR BOX.)
- MOTOR 단자 BOX 부착 및 CABTYRE CABLE 부착으로 기밀을 유지합니다. (Improvement of security for TERMINAL BOX TYPE MOTOR) (IP54)
- 세계 주요 지역의 광범위한 전압 및 해외규격 대응이 가능합니다.(Applicable in America, Europe & S.E Asia)(UL, CE 및 CCC 인증 취득)
- 절연등급 (Insulation Class) : B종 (Class) (130℃)

□104 MOTOR CODING SYSTEM

MAKER MODEL	SIZE	TYPE	OUTPUT	SHAFT TYPE	VOLTAGE		SPECIAL TYPE
S	10	I	200	G	B	-	T

S : SPG Co., Ltd.

10 : □104(㎜)

I : Induction Motor

200 : 200W

EX) G : GEAR TYPE
D : D-cut Type
K : Key Type

A :	1ØAC 100V	50/60Hz	(4Pole)
	1ØAC 110/115V	60Hz	(4Pole)
B :	1ØAC 200V	50/60Hz	(4Pole)
	1ØAC 220V	60Hz	(4Pole)
	1ØAC 230V	50/60Hz	(4Pole)
T :	3ØAC 200V	50/60Hz	(4Pole)
	3ØAC 220V	50/60Hz	(4Pole)
	3ØAC 230V	60Hz	(4Pole)

EX) T : Terminal Box Type
(Terminal Block Type)

□104 GEAR HEAD CODING SYSTEM

MAKER MODEL	SIZE	SHAFT TYPE	OUTPUT	GEAR RATIO		SPECIAL TYPE
S	10	K	V	180	-	□□□

S : SPG Co., Ltd.

10 : □104㎜

S : Straight type
D : D-cut type
K : Key type

V : □104 200W

3~180 : Reduction Ratio

Type		Poles	Output (W)	Voltage (V)	Freq. (Hz)	Duty	Rated Load			Starting Touque (kgf-cm)	Capacitor (μF)
단자 BOX	LEAD WIRE						Current (A)	Speed (rpm)	Torque (kgf-cm)		
S10I200□A-T	S10I200□A	4	200	1Ø 100	50	CONT.	3.45	1250	15.6	8.8	47
					60		3.05	1550	12.6	8.8	
				1Ø 100	60		2.85	1550	12.6	8.8	40
				1Ø 115			2.85	1600	12.2	9.8	
S10I200□B-T	S10I200□B	4	200	1Ø 200	50	CONT.	1.65	1250	15.6	8.8	12
					60		1.57	1550	12.6	8.8	
				1Ø 220	60		1.40	1550	12.6	8.8	10
				1Ø 230	50		1.66	1300	15.0	9.8	
					60		1.36	1600	12.2	9.8	
S10I200□T-T	S10I200□T	4	200	3Ø 200	50	CONT.	1.10	1250	15.6	15.6	–
					60		1.05	1500	13.0	13.0	
				3Ø 220	50		1.05	1300	15.0	15.0	
					60		0.95	1550	12.6	12.6	
				3Ø 230	60		0.95	1600	12.2	12.2	

50Hz

GEAR RATIO		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
MODEL	rpm	500	417	300	250	200	167	120	100	83	60	50	42	30	25	20	17	15	12.5	10	8.3
S10KV□	kg-cm	41	49	68	82	103	123	163	196	235	327	392	400	400	400	400	400	400	400	400	400
	N·m	4.1	4.9	6.8	8.2	10.3	12.3	16.3	19.6	23.5	32.7	39.2	40	40	40	40	40	40	40	40	40
	효율 (Efficiency)	90%						86%						81%							

60Hz

GEAR RATIO		3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
MODEL	rpm	600	500	360	300	240	200	144	120	100	72	60	50	36	30	24	20	18	15	12	10
S10KV□	kg-cm	34	41	57	69	86	103	137	164	197	273	328	393	400	400	400	400	400	400	400	400
	N·m	3.4	4.1	5.7	6.9	8.6	10.3	13.7	16.4	19.7	27.3	32.8	39.3	40	40	40	40	40	40	40	40
	효율 (Efficiency)	90%						86%						81%							

❖ 회전방향은 ■색이 MOTOR와 동일한 회전방향 이고, 기타는 MOTOR와 반대방향으로 회전합니다. (■ color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor. Others indicate rotation in the opposite direction.)

❖ 회전수는 MOTOR의 동기 회전수를 기준으로 하였습니다. (Rpm is based on synchronous speed (50Hz: 1500rpm, 60Hz: 1800rpm) divided by gear ratio. The actual rotation speed can be 2~20% less than displayed value depending on the load.)

❖ 효율은 참고값으로, 실제 적용 시 상이할 수 있습니다. (The efficiency referenced may vary when applied.)

허용 부하 관성 (PERMISSIBLE LOAD INERTIA) MOMENT

구분 (DIVISION)	출력축에서의 허용 부하 관성 MOMENT (PERMISSIBLE LOAD INERTIA MOMENT IN OUTPUT SHAFT)		비고
	$J(\times 10^{-4}kg\text{-}m^2)$	$GD^2(kgf\text{-}cm^2)$	
MOTOR	2	8	J_G : GEAR HEAD 허용 부하 관성 MOMENT(Permissible load inertia on the gear head output shaft.) J_M : MOTOR 허용 부하 관성 MOMENT (Permissible load inertia on the motor shaft.) i : 감속비 (Gear Ratio)
GEAR HEAD	$J_G = J_M \times i^2$ (감속비 1/3~50일 경우 (Gear ratio 1/3~1/50)) $J_G = J_M \times 2500$ (감속비 1/60 이상일 경우 (Gear ratio 1/60 or higher))		

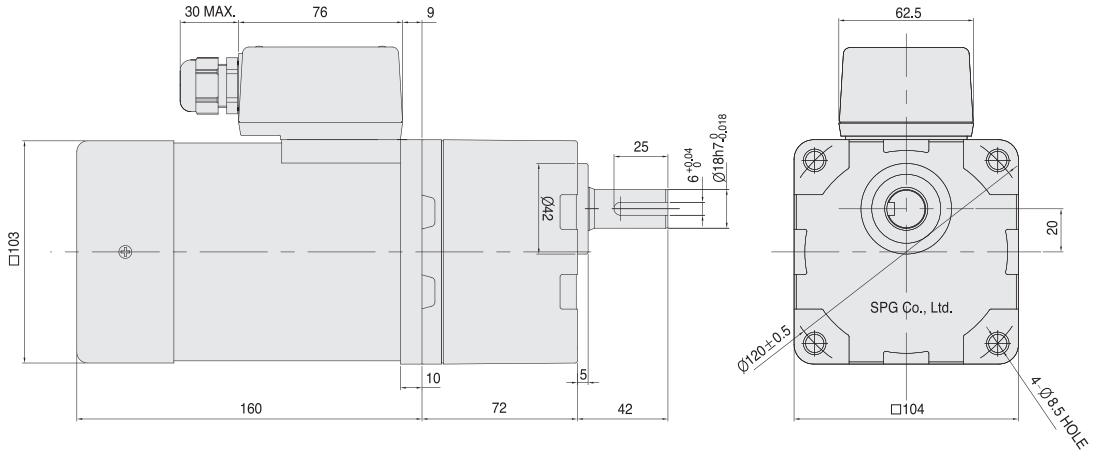
허용 (PERMISSIBLE) OVERHUNG / TRUHST 하중 (LOAD0

구분 (DIVISION)		허용(PERMISSIBLE) OVERHUNG 하중(LOAD) N (kgf)		허용(PERMISSIBLE) THRUST 하중(LOAD) N(kgf)
		SHAFT(SPINDLE) 앞끝에서 거리 (DISTANCE FROM FRONT EDGE OF)		
		10㎜	20㎜	
MOTOR		320(32)	350(35)	–
GEAR HEAD	감속비 (GEAR RATIO) 1/3~36	550(55)	800(80)	200(20)
	감속비(GEAR RATIO) 1/50~180	650(65)	1000(100)	

DIMENSIONS : TERMINAL BOX TYPE

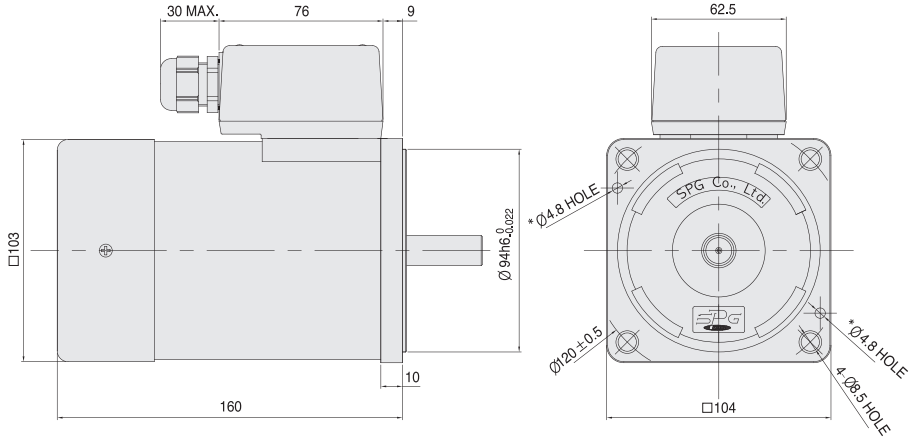
✚ GEARED MOTOR

※ MOTOR MODEL : S10I200□□ -T
※ GEAR HEAD MODEL : S10KV□

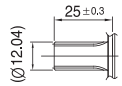
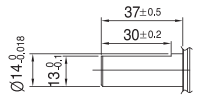
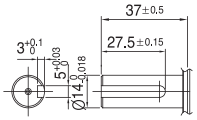


✚ MOTOR

※ MOTOR MODEL : S10I200□□ -T



✚ MOTOR 출력축 사양 (SPEC for output shaft of Motor)

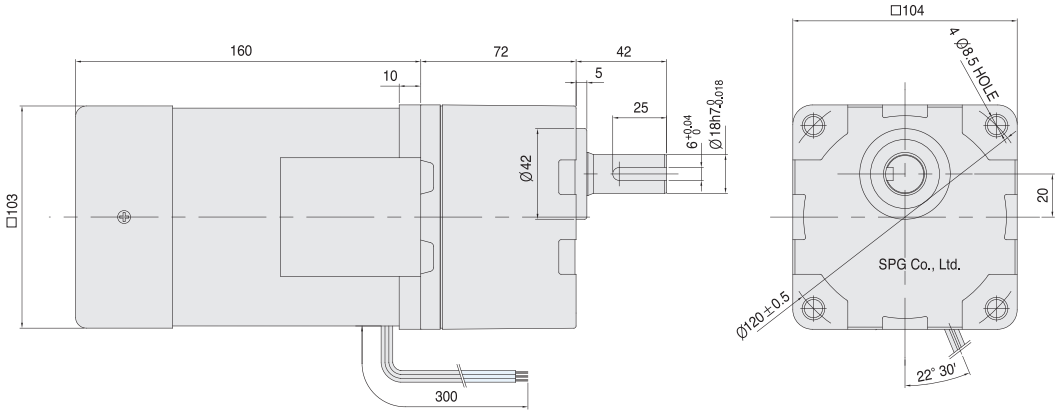
구분 (MODEL)	출력축 치수 (TYPES OF OUTPUT SHAFT)
GEAR TYPE	
D-CUT TYPE	
KEY TYPE	

※ Ø4.8 HOLE 2개소는 GEAR TYPE MOTOR에만 적용됨
(Two of Ø4.8 holes shall be used for gear type motor only.)

DIMENSIONS : LEAD WIRE TYPE

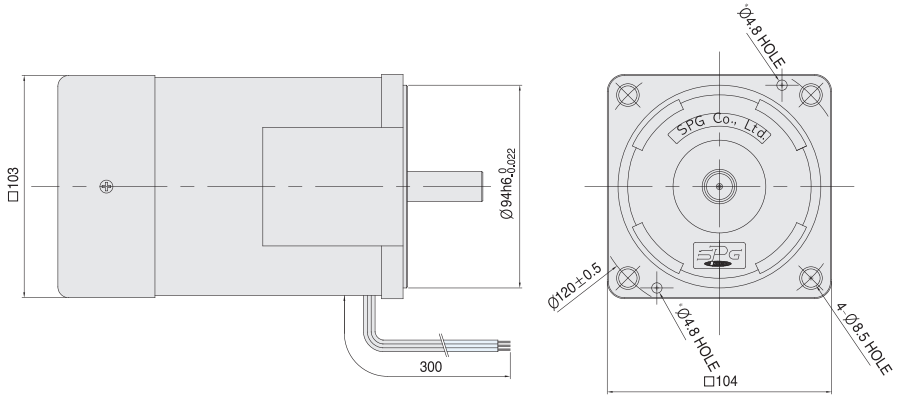
✚ GEARED MOTOR

※ MOTOR MODEL : S10I200□□
※ GEAR HEAD MODEL : S10KV□

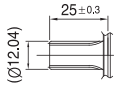
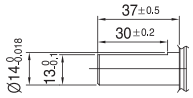
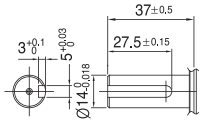


✚ MOTOR

※ MOTOR MODEL : S10I200□□



✚ MOTOR 출력축 사양 (SPEC for output shaft of Motor)

구분 (MODEL)	출력축 치수 (TYPES OF OUTPUT SHAFT)
GEAR TYPE	
D-CUT TYPE	
KEY TYPE	

※ Ø4.8 HOLE 2개소는 GEAR TYPE MOTOR에만 적용됨
(Two of Ø4.8 holes shall be used for gear type motor only.)

SCHEMATIC DIAGRAMS

회전방향은 MOTOR의 SHAFT 끝쪽에서 볼 때의 회전방향입니다. (The direction of motor rotation is as viewed from the front shaft end of the motor.)

MODEL : S10I200□A, S10I200□A-T POWER : AC 1Ph. 100V 50/60Hz, 110/115V 60Hz		MODEL : S10I200□B, S10I200□B-T POWER : AC 1Ph. 200V 50/60Hz, 220 60Hz, 230V 50/60Hz		MODEL : S10I200□T, S10I200□T-T POWER : AC 3Ph. 200V 50/60Hz, 220 50/60Hz, 230V 60Hz	
CW	**CCW**	**CW**	**CCW**	**CW**	**CCW**
