DC GEARED MOTOR

SPG Co., Ltd.



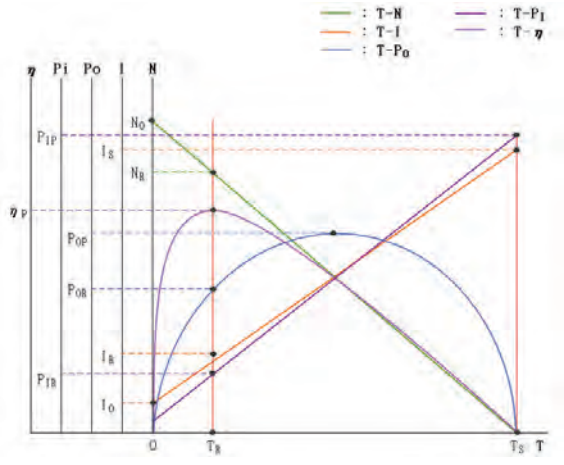
기술자료 설명(TECHNICAL EXPLANTION)

영구자석형 직류(DC) MOTOR

1. DC MOTOR 특징(FEATURE)

- DC MOTOR는 기동 TORQUE가 커서 기동성이 뛰어나며, AC MOTOR의 같은 SIZE대비 출력이 크며, 효율이 높습니다.
- 속도제어가 용이하고, 정/역 회전 변경이 용이합니다.
- AC MOTOR에 비해 다양한 사양, 특히 BATTERY 전원(12V, 24V등)을 사용하는 PORTABLE TYPE SET에 적용 할 수 있는 저전압 MOTOR 제작이 가능합니다.
- Excellent performance on starting owing to high starting torque
- High efficiency in comparison with the same size AC Motor
- Easy to control speed and change the rotational direction
- Instantaneous stop
- Due to the wide range of the rated voltage, low voltage motors applicable to portable equipments can be realized

2. DC MOTOR 특징 CURVE(DC MOTOR PERFOMANCE CURVE)



기본측정량 (Symbol : Motor Data(Unit))	각 POINT가 의미하는 양 (Value per each spec)
N : 회전수(rpm) (Revolution Speed)	No : 무부하시 회전수 (No load revolution speed)(rpm) NR : 정격부하시(PEAK 효율시) 회전수 (Rated load revolution speed)(rpm)
T : Torque(kgf·cm)	TR : 정격부하시(PEAK 효율시) Torque (Rated load torque)(kgf·cm) TS : 구속시 Torque(Peak Torque (Stall))(kgf·cm)
I : 전류(A) (Current)	Io : 무부하시 전류(No-load current)(A) IR : 정격부하시(PEAK 효율시) 전류 (Rated load current)(A) IS : 구속시 전류(Peak current (Stall))(A)
Po : 출력(W) (Output)	PoP : PEAK 출력(Max. output)(W) PoR : 정격부하시(PEAK 효율시) 출력(Rated output)(W)
Pi : 입력(W) (Input)	PiP : PEAK 입력(Max. input)(W) PiR : 정격부하시(PEAK 효율시) 입력(Rated input)(W)
η : 효율(%) (Efficiency)	ηP : PEAK 효율 (정격부하시)(Peak efficiency)

기본 계산식(Calculation Formula)	계산보기(Examples)
$Po(W) = N(rpm) \times T(kgf \cdot cm) \times 1.027 \times 10^{-2}$	$P_{OP} = (T_S/2) \times (N_O/2) \times 1.027 \times 10^{-2}$
	$P_{OR} = T_R \times N_R \times 1.027 \times 10^{-2}$
$P_I(W) = I(A) \times V(V)$, (V : 전원전압(Supply Voltage))	$P_{IP} = I_S \times V$
	$P_{IR} = I_R \times V$
$\eta(\%) = Po/P_I \times 100$	$\eta_P = P_{OR}/P_{IR} \times 100$

3. DC MOTOR 선정 조건 (Selecting DC Motor)

일반적으로 DC MOTOR의 능력은 MOTOR의 출력값으로 나타내는데, DC MOTOR의 출력은 부하에 따라 변동합니다
(그래프의 파란색 선 참조) 통상, MOTOR의 출력이라 하면 MOTOR가 최대효율(η_P)을 나타내는 부하점(T_R)에서의 출력을 의미합니다.
이 최대효율점 이하의 부하에서 MOTOR를 사용하면 열이 발생하더라도 연속운전이 가능합니다. 만약, 최대출력지점(P_{OP}, T_S / 2)이나,
구속토오크(T_S)에 근접하는 부하점과 같이 MOTOR에 정격부하를 능가하는 과부하를 인가하여 사용한다면, 사용시간에 제한을 두어야 합니다.
MOTOR를 과부하 조건에서 사용하면 내구성 및 모터수명에 영향을 줄 수 있습니다.
The output of a motor represents the ability of a motor.
Generally, "Motor output" means the output at rated torque (T_R)
The motor is able to operate continuously without heatsink when the load torque is less than the rate torque (T_R)
Otherwise, the motor should operate intermittently. When the motor operates at the overload torque, it might be damaged.

4. DC MOTOR 장단점 비교 (Pros and Cons of DC MOTOR)

▶ 4-1. 장점(Pros)

1. 속도제어, 정/역회전 변경이 용이합니다.
   (The Ease of Speed control and Transition to CCW/CW.)
2. 기동 TORQUE가 큽니다.(High Starting TORQUE)
3. 같은 크기의 교류(AC) MOTOR에 비해 출력이 크고 동시에 효율이 좋습니다.
   (High input and efficiency)
4. 교류MOTOR에 비해 저전압 사양 및 절연의 간소화가 가능합니다.
   (Low Voltage spec and simple insulation process.)

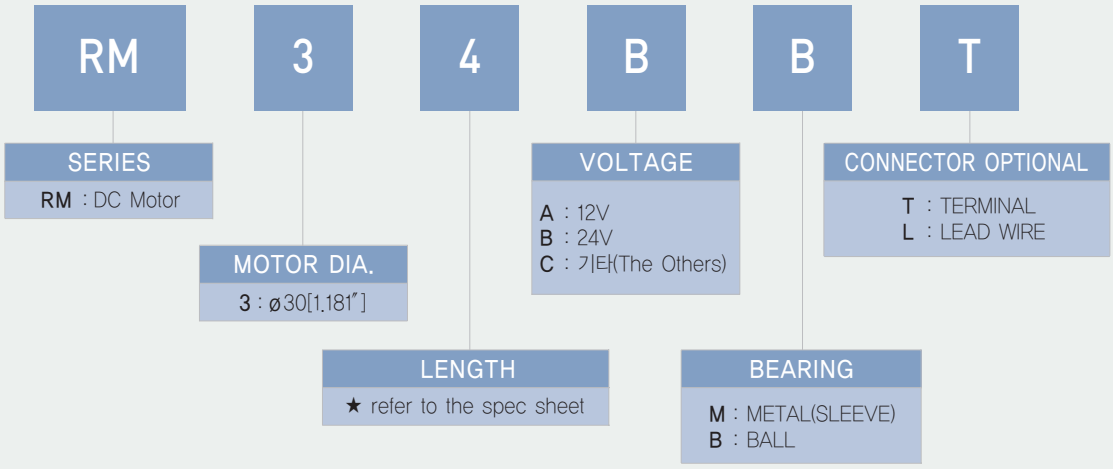
▶ 4-2. 단 점(Cons)

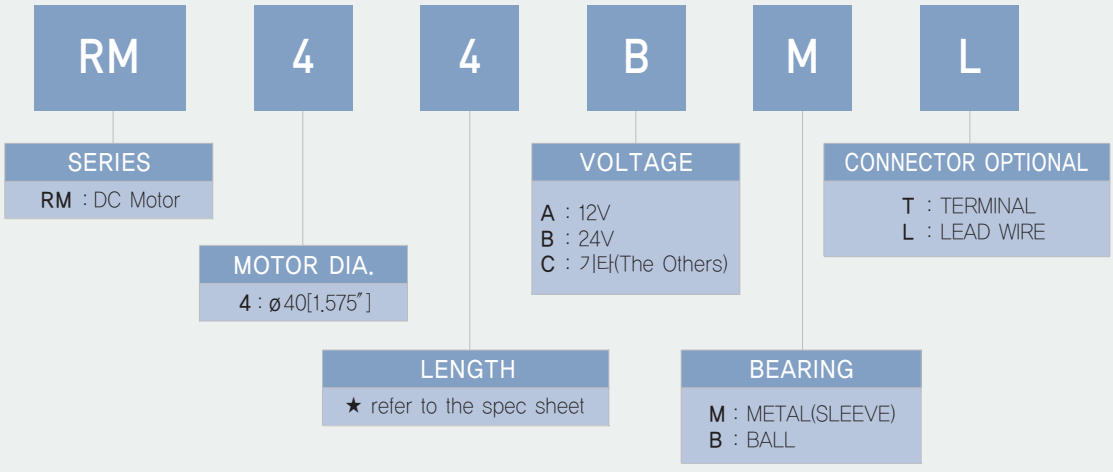
1. BRUSH의 마모로 수명에 한계가 있습니다.
   (Short life time caused by Abrasion of Brush.)
2. BRUSH와 정류자에 의해서 노이즈가 발생됩니다.
   (High Noise caused by Brush and Commutator.)

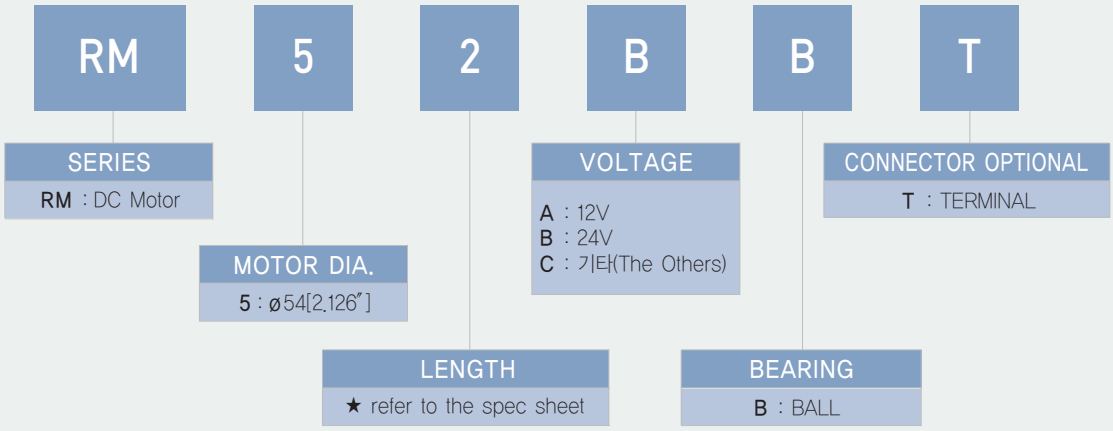
CODING SYSTEM

COMPACT TYPE

RM TYPE



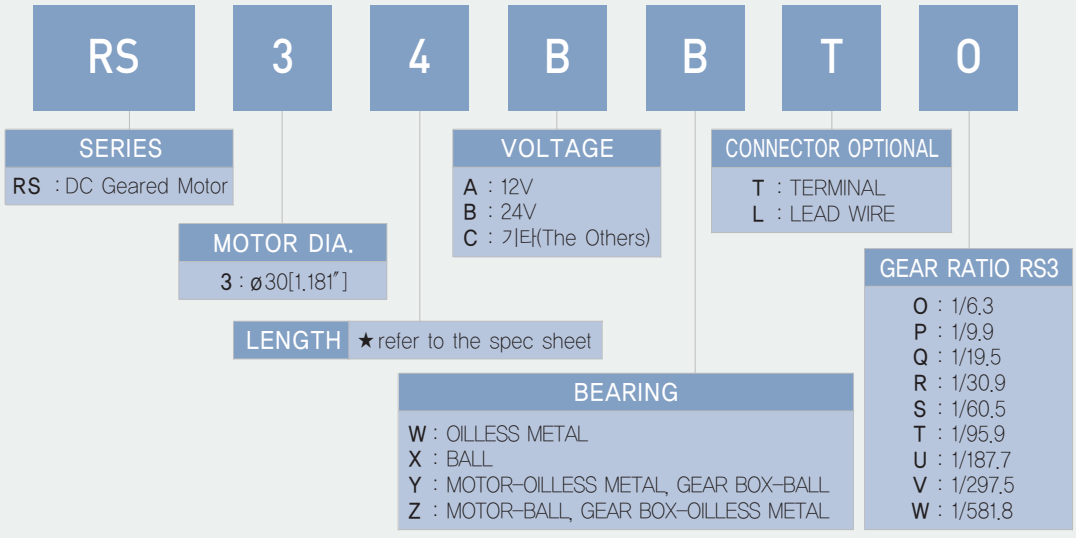


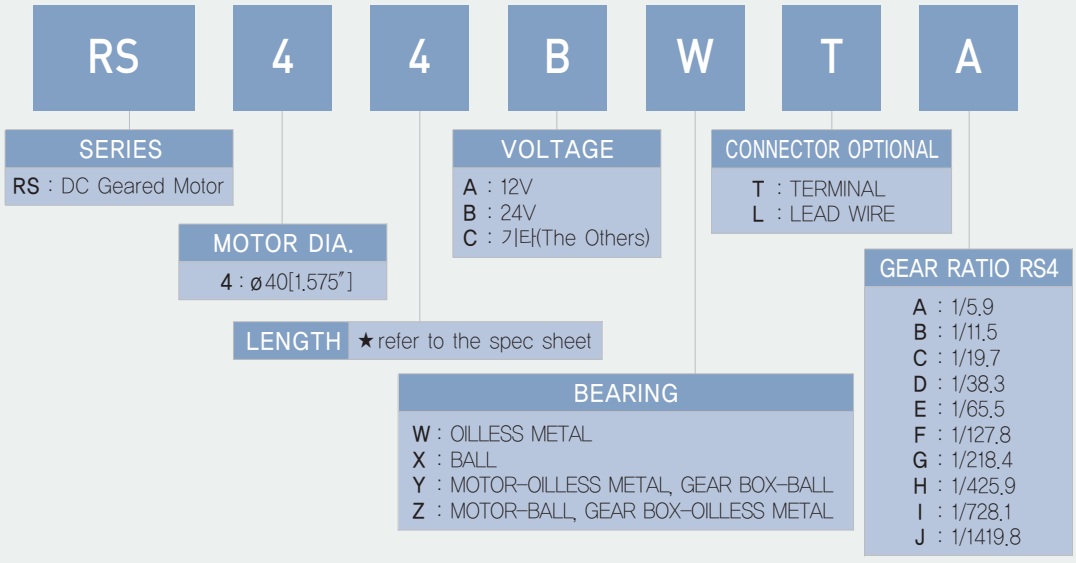


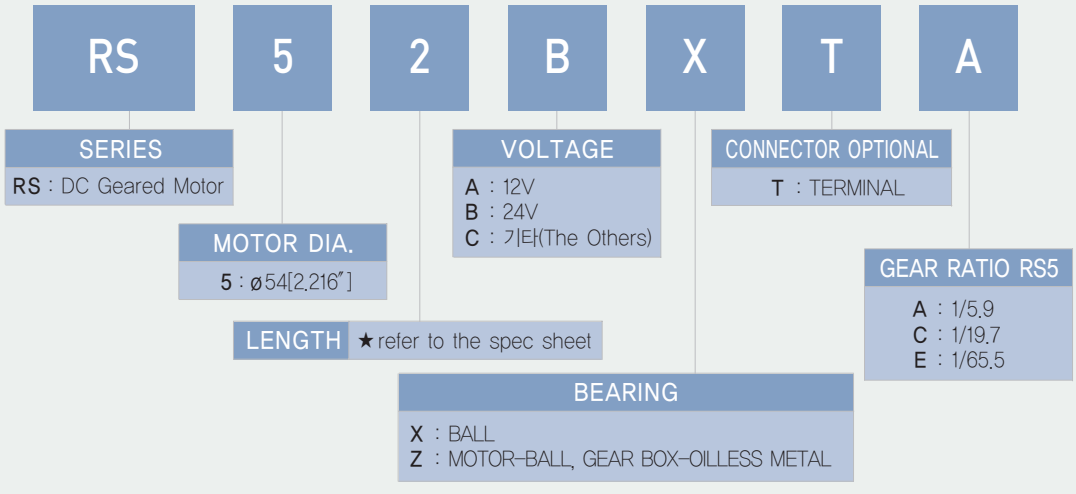
CODING SYSTEM

COMPACT TYPE

RS TYPE



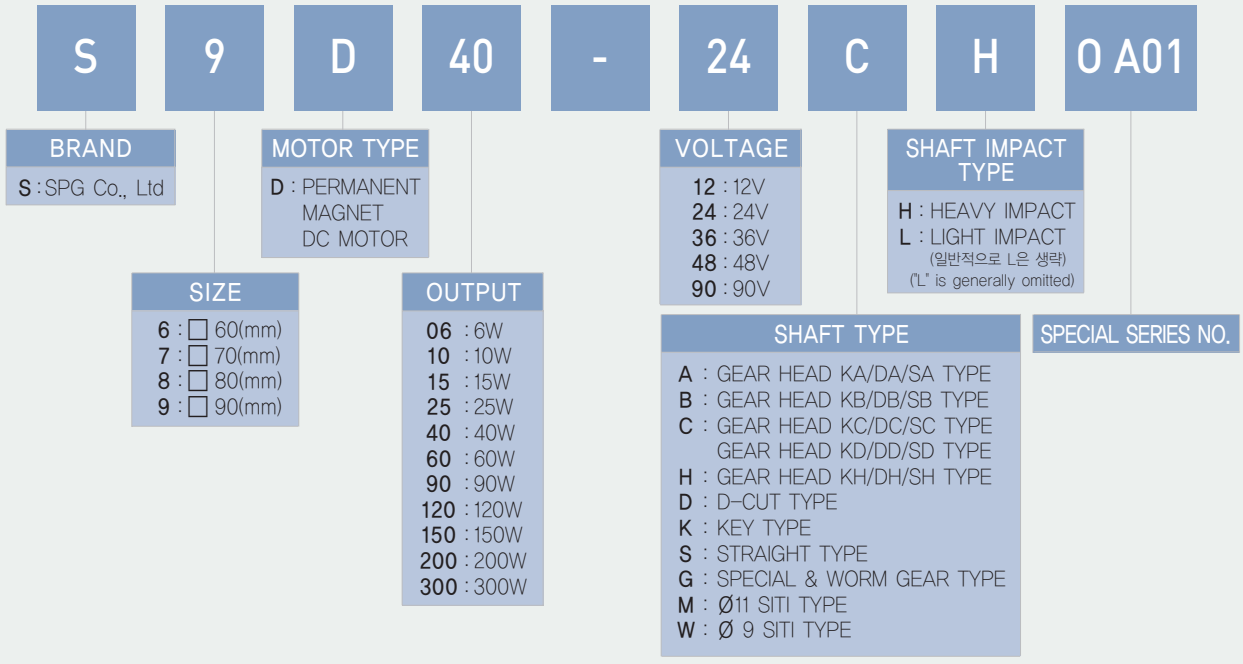




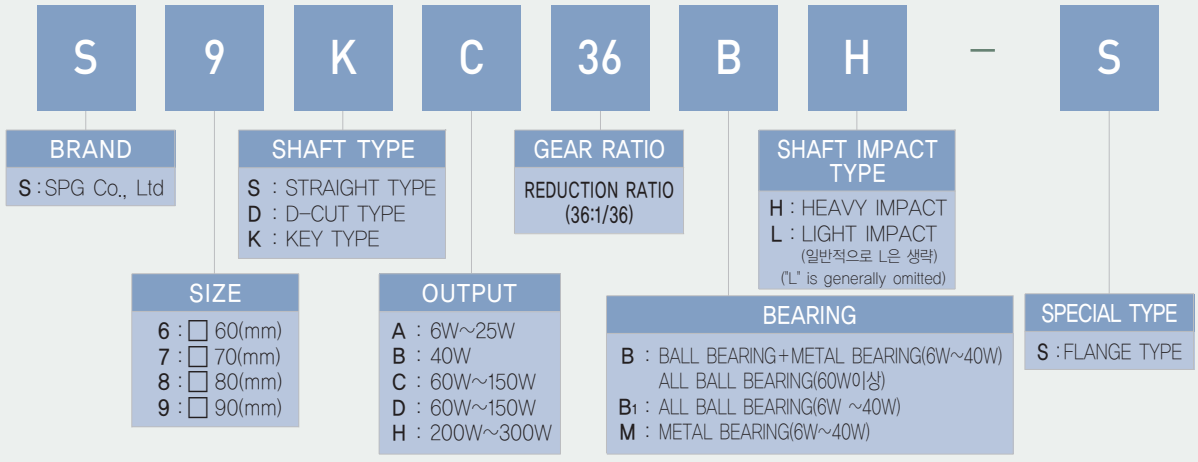
CODING SYSTEM

COMPACT TYPE

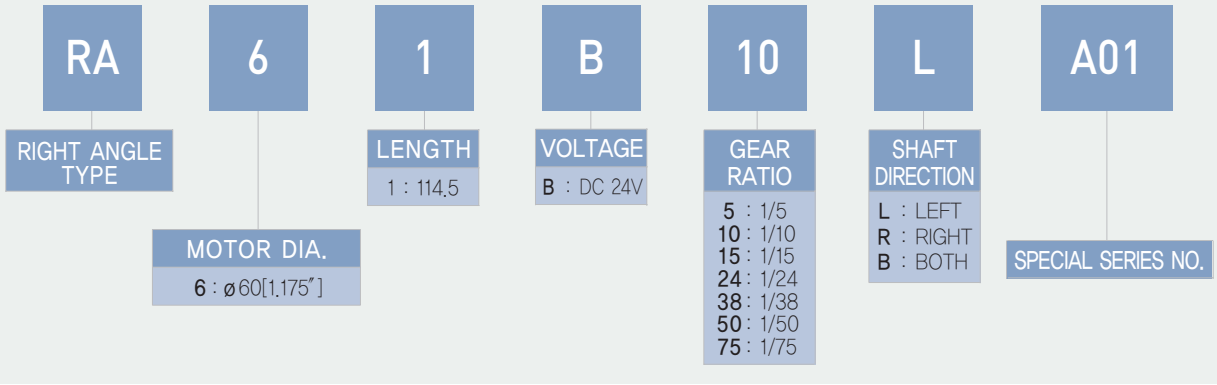
DC MOTOR



GEAR HEAD



DC WORM GEARED MOTOR



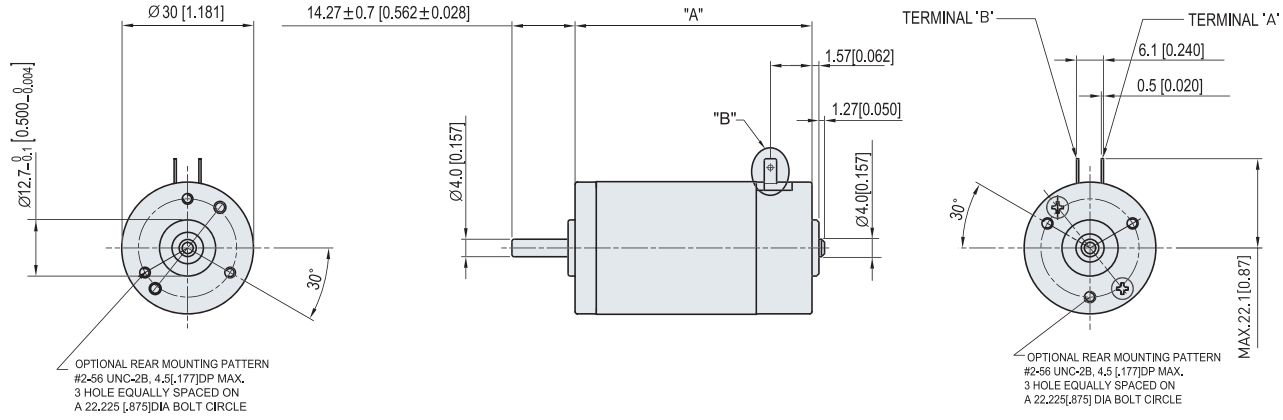


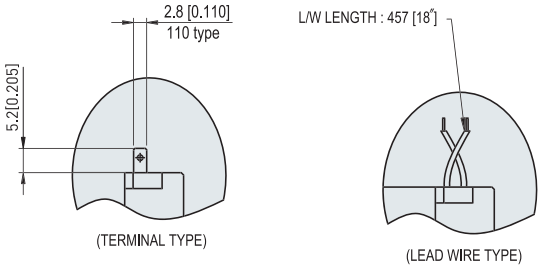
COMPACT TYPE

RM3 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]





DETAIL "B" CONNECTOR METHOD

MODEL NO.	"A"
RM32□□□	50.6 [1.992]
RM33□□□	53.7 [2.114]
RM34□□□	60.0 [2.362]

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	No Load		Rated				Stall(Peak)			Run Duty	Weight
	Revolution	Current	Contionuous Torque(Max.)		Revolution	Current	Peak Torque		Current		
	RPM	A	–		RPM	A	–		A	Hr	Kg
RM32B□□	7750	0.24	0.011	N-m	5800	0.55	0.048	N-m	2.05	500	0.59
			1.6	oz-in			6.8	oz-in			
			0.11	kgf · cm			0.49	kgf · cm			
RM33B□□	8132	0.28	0.014	N-m	6550	0.62	0.070	N-m	3.15	500	0.74
			2.0	oz-in			9.9	oz-in			
			0.14	kgf · cm			0.71	kgf · cm			
RM34B□□	10160	0.40	0.018	N-m	8120	1.11	0.127	N-m	6.05	500	0.89
			2.5	oz-in			18.0	oz-in			
			0.18	kgf · cm			1.30	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load.)

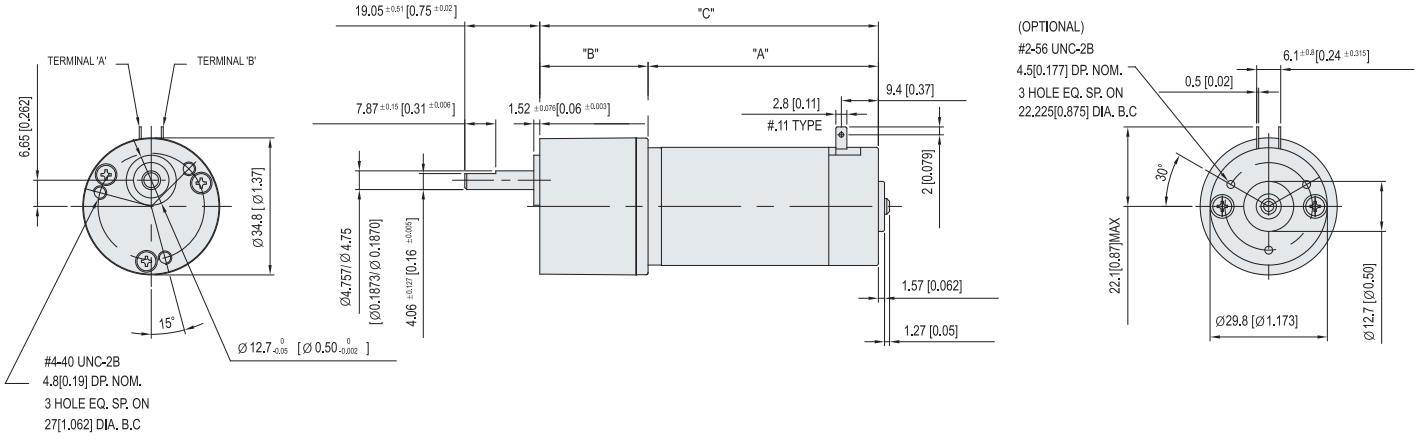
COMPACT TYPE

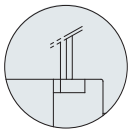
RS3 SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]





CONNECTOR OPTIONAL

LEAD WIRES
457±10[17.992±0.787](L/W LENGTH)
RED&BLACK

MODEL NO.	"A"	"B"		"C"
		RATIO : ~ 1/187.7	RATIO : 1/297.5 ~	
RS32□□□□	50.1 [1.972]	24.5 [0.965]	27.5 [1.083]	74.6 [2.937], 77.6 [3.055]
RS33□□□□	52.2 [2.055]			76.7 [3.020], 79.7 [3.138]
RS34□□□□	58.5 [2.303]			83.0 [3.268], 86.0 [3.386]

PERMISSIBLE TORQUE OF GEAR BOX

TYPE	GEAR RATIO	6.3	9.9	19.5	30.9	60.5	95.9	187.7	297.5	581.8
RS32B□□□	No Load rpm	1230	783	397	251	128	81	41	26	13
	N-m	0.06	0.08	0.16	0.22	0.44	0.62	1.22	1.23	1.23
	oz-in	7.9	11.2	22.1	31.6	61.8	88.2	172.6	174.8	174.8
	kgf · cm	0.57	0.81	1.60	2.28	4.46	6.36	12.44	12.60	12.60
RS33B□□□	No Load rpm	1291	821	417	263	134	85	43	27	14
	N-m	0.07	0.10	0.20	0.28	0.56	0.79	1.23	1.23	1.23
	oz-in	10.1	14.3	28.2	40.2	78.7	112.3	174.8	174.8	174.8
	kgf · cm	0.73	1.03	2.03	2.90	5.67	8.09	12.60	12.60	12.60
RS34B□□□	No Load rpm	1613	1026	521	329	168	106	54	34	17
	N-m	0.09	0.13	0.26	0.36	0.71	1.02	1.23	1.23	1.23
	oz-in	13.0	18.4	36.2	51.7	101.2	144.3	174.8	174.8	174.8
	kgf · cm	0.94	1.33	2.61	3.72	7.29	10.40	12.60	12.60	12.60

■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다.(No Load rpm equals Motor no load rpm divided by gear ratio. 실제의 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다.(The actual rotation speed is less 2-20% than the displayed value according to the load.)

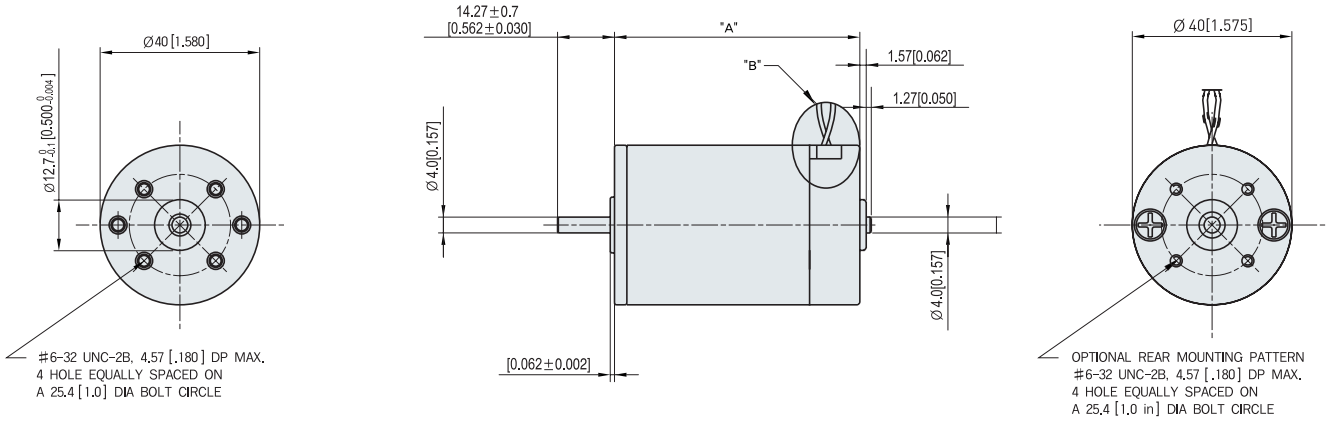


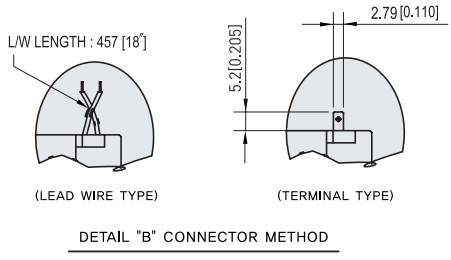
COMPACT TYPE

RM4 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]





DETAIL "B" CONNECTOR METHOD

MODEL NO.	"A"
RM42□□□	46.4 [1.827]
RM43□□□	56.0 [2.205]
RM44□□□	61.1 [2.406]
RM45□□□	68.7 [2.705]
RM46□□□	77.6 [3.055]

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	No Load		Rated				Stall(Peak)			Run Duty	Weight
	Revolution	Current	Contionuous Torque(Max.)		Revolution	Current	Peak Torque		Current		
	RPM	A	–		RPM	A	–		A	Hr	Kg
RM42B□□	7015	0.24	0.02	N-m	5497	0.74	0.064	N-m	2.9	1000	0.20
			2.22	oz-in			9.02	oz-in			
			0.16	kgf · cm			0.65	kgf · cm			
RM43B□□	5993	0.20	0.03	N-m	4486	1.13	0.140	N-m	5.0	1000	0.25
			4.58	oz-in			19.84	oz-in			
			0.33	kgf · cm			1.43	kgf · cm			
RM44B□□	6151	0.24	0.04	N-m	5111	1.20	0.266	N-m	7.7	1000	0.29
			5.97	oz-in			37.61	oz-in			
			0.43	kgf · cm			2.71	kgf · cm			
RM45B□□	6348	0.30	0.05	N-m	5440	1.58	0.324	N-m	10.8	1000	0.33
			6.80	oz-in			45.93	oz-in			
			0.49	kgf · cm			3.31	kgf · cm			
RM46B□□	4916	0.24	0.07	N-m	4101	1.53	0.369	N-m	8.7	1000	0.39
			9.44	oz-in			52.32	oz-in			
			0.68	kgf · cm			3.77	kgf · cm			

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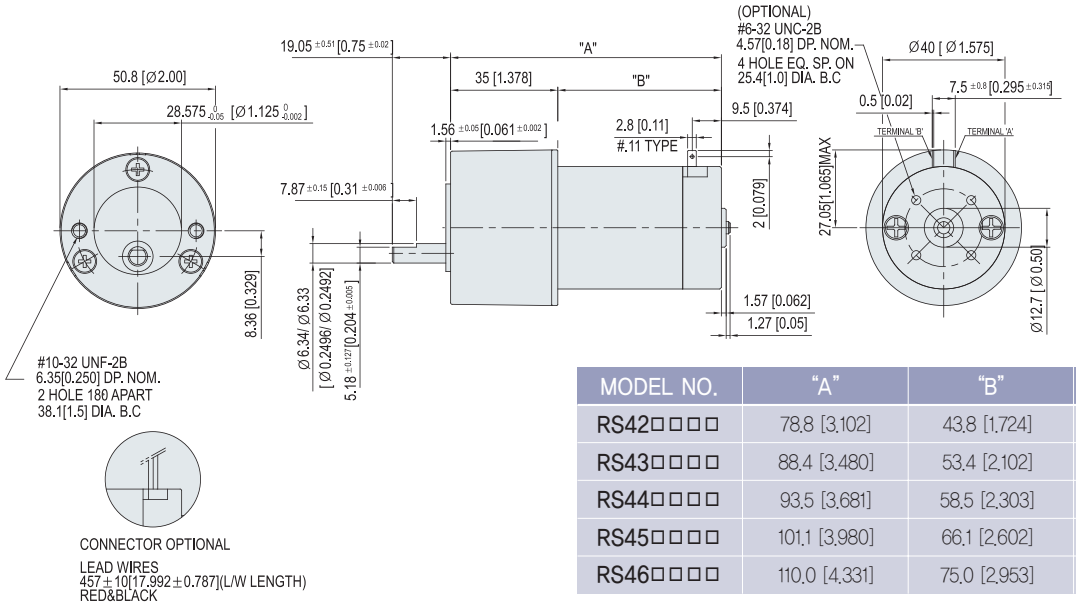
COMPACT TYPE

RS4 SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"	WEIGHT(kg)
RS42□□□□	78.8 [3.102]	43.8 [1.724]	0.39
RS43□□□□	88.4 [3.480]	53.4 [2.102]	0.43
RS44□□□□	93.5 [3.681]	58.5 [2.303]	0.50
RS45□□□□	101.1 [3.980]	66.1 [2.602]	0.54
RS46□□□□	110.0 [4.331]	75.0 [2.953]	0.58

PERMISSIBLE TORQUE OF GEAR BOX

TYPE	GEAR RATIO	5.9	11.5	19.7	38.3	65.5	127.8	218.4	425.9	728.1	1419.8
RS42□□□□	No Load rpm	1189	610	356	183	107	55	32	16	10	5
	N-m	0.07	0.15	0.23	0.44	0.67	1.31	2.02	2.12	2.12	2.12
	oz-in	10.6	20.7	31.9	62.0	95.4	186.2	286.3	299.7	299.7	299.7
	kgf · cm	0.76	1.49	2.30	4.47	6.88	13.42	20.63	21.60	21.60	21.60
RS43□□□□	No Load rpm	1016	521	304	156	91	47	27	14	8	4
	N-m	0.15	0.30	0.46	0.90	1.39	2.12	2.12	2.12	2.12	2.12
	oz-in	21.9	42.7	65.8	127.9	196.8	299.7	299.7	299.7	299.7	299.7
	kgf · cm	1.58	3.07	4.74	9.21	14.18	21.60	21.60	21.60	21.60	21.60
RS44□□□□	No Load rpm	1043	535	312	161	94	48	28	14	8	4
	N-m	0.20	0.39	0.61	1.18	1.81	2.12	2.12	2.12	2.12	2.12
	oz-in	28.5	55.6	85.7	166.6	256.4	299.7	299.7	299.7	299.7	299.7
	kgf · cm	2.05	4.01	6.18	12.01	18.48	21.60	21.60	21.60	21.60	21.60
RS45□□□□	No Load rpm	1076	552	322	166	97	50	29	15	9	4
	N-m	0.23	0.45	0.69	1.34	2.06	2.12	2.12	2.12	2.12	2.12
	oz-in	32.5	63.3	97.7	189.9	292.2	299.7	299.7	299.7	299.7	299.7
	kgf · cm	2.34	4.56	7.04	13.68	21.06	21.60	21.60	21.60	21.60	21.60
RS46□□□□	No Load rpm	833	427	250	128	75	38	23	12	7	3
	N-m	0.32	0.62	0.96	1.86	2.12	2.12	2.12	2.12	2.12	2.12
	oz-in	45.1	87.9	135.5	263.5	299.7	299.7	299.7	299.7	299.7	299.7
	kgf · cm	3.25	6.33	9.77	18.99	21.60	21.60	21.60	21.60	21.60	21.60

■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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.)

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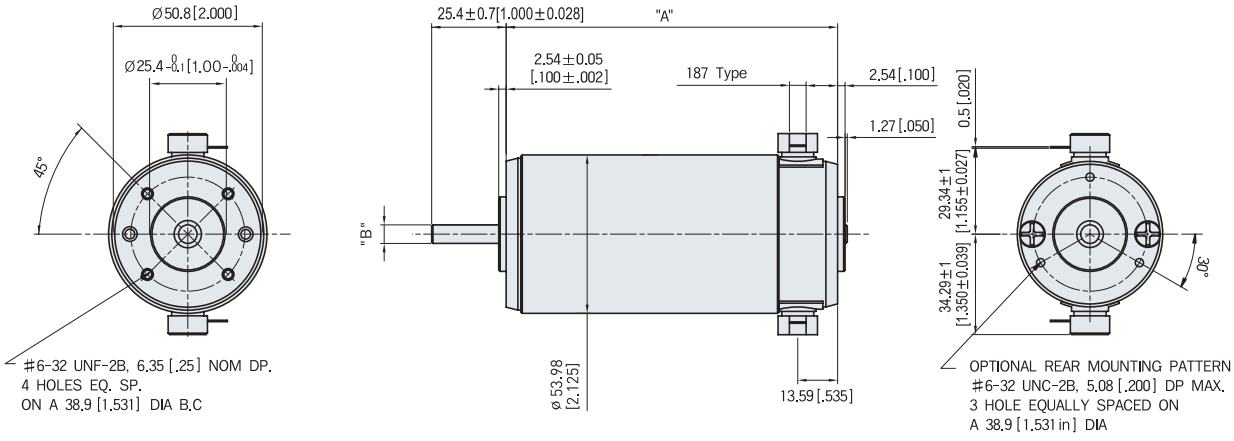


COMPACT TYPE

RM5 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
RM51□□□	75.0 [2.953]	6.336±0.003 [0.2494±0.0001]
RM52□□□	81.0 [3.189]	
RM53□□□	94.0 [3.701]	

MODEL NO.	"A"	"B"
RM54□□□	103.4 [4.071]	6.336±0.003 [0.2494±0.0001]
RM55□□□	113.0 [4.449]	

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	No Load		Rated				Stall(Peak)			Run Duty	Weight
	Revolution	Current	Contionuous Torque(Max.)		Revolution	Current	Peak Torque		Current		
	RPM	A	–		RPM	A	–		A	Hr	Kg
RM51B□T	4230	0.4	0.06	N-m	3725	1.36	0.46	N-m	11.36	2000	0.59
			8.0	oz-in			64.5	oz-in			
			0.58	kgf · cm			4.65	kgf · cm			
RM52B□T	4087	0.5	0.09	N-m	3595	1.94	0.67	N-m	15.55	2000	0.74
			12.8	oz-in			94.8	oz-in			
			0.92	kgf · cm			6.83	kgf · cm			
RM53B□T	3400	0.5	0.15	N-m	2930	2.67	0.96	N-m	19.27	2000	0.89
			21.2	oz-in			135.7	oz-in			
			1.53	kgf · cm			9.78	kgf · cm			
RM54B□T	3630	0.5	0.18	N-m	3180	3.18	1.31	N-m	26.47	2000	1
			25.5	oz-in			185.4	oz-in			
			1.84	kgf · cm			13.36	kgf · cm			
RM55B□T	2900	0.4	0.22	N-m	2510	3.05	1.46	N-m	23.6	2000	1.12
			31.1	oz-in			207.0	oz-in			
			2.24	kgf · cm			14.92	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load.)

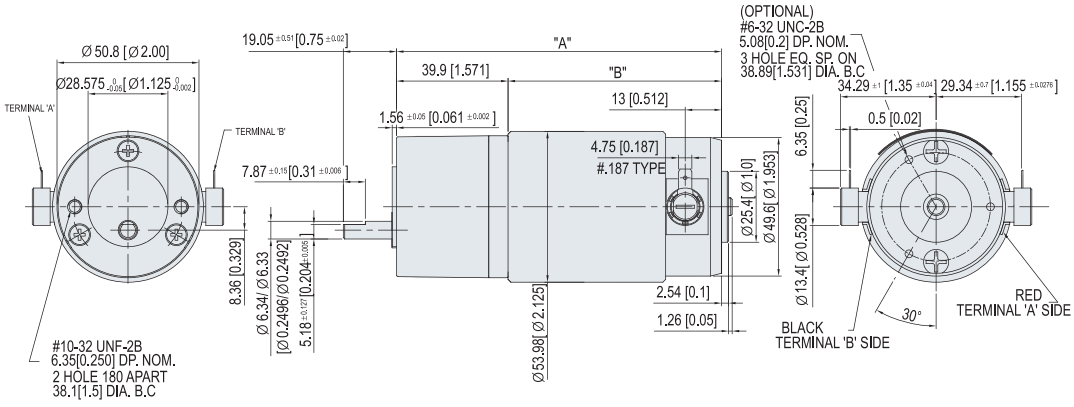
COMPACT TYPE

RS5 SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



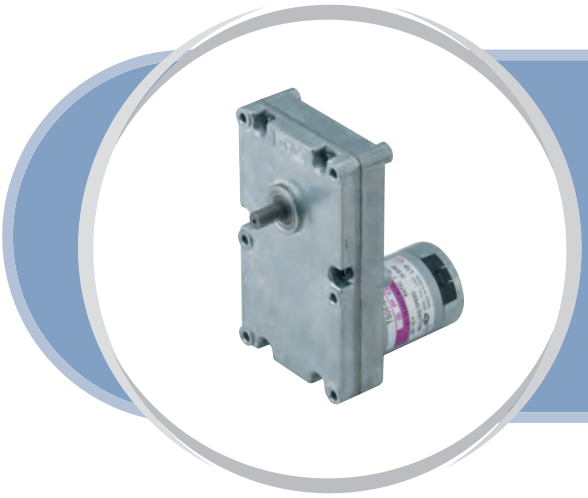
MODEL NO.	"A"	"B"	WEIGHT(kg)
RS51□□□□	109.9 [4.327]	70.0 [2.756]	0.84
RS52□□□□	115.90 [4.563]	76.0 [2.992]	0.95

PERMISSIBLE TORQUE OF GEAR BOX

TYPE	GEAR RATIO	5.9	19.7	65.5
RS51B□□□	No Load rpm	717	215	65
	N-m	0.27	0.82	2.12
	oz-in	38.46	115.59	299.74
	kgf · cm	2.77	8.33	21.60
RS52B□□□	No Load rpm	693	207	62
	N-m	0.43	1.29	2.12
	oz-in	61.01	183.35	299.74
	kgf · cm	4.40	13.21	21.60

■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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.)

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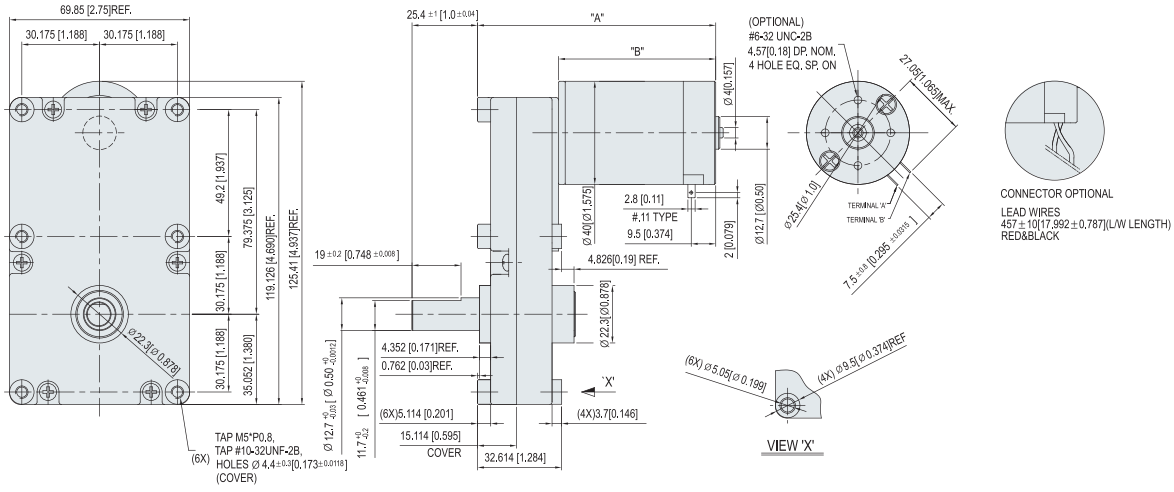


COMPACT TYPE

SG SERIES GEARED MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
SG42□□□□	77.814 [3.064]	46.4 [1.827]
SG43□□□□	87.414 [3.441]	56.0 [2.205]
SG44□□□□	92.514 [3.642]	61.1 [2.406]

MODEL NO.	"A"	"B"
SG45□□□□	100.114 [3.941]	68.7 [2.705]
SG46□□□□	109.014 [4.292]	77.6 [3.055]

PERMISSIBLE TORQUE OF GEAR BOX

(Voltage : DC 24V)

TYPE	GEAR RATIO	395.7	1218.1	1412.5	1620.7	1709.9	3238.2
SG42B□□□	No Load rpm	17.7	5.8	5.0	4.3	4.1	2.2
	N-m	4.07	11.28	13.08	15.01	15.83	29.98
	oz-in	576.4	1596.9	1851.9	2124.8	2241.8	4245.2
	kgf · cm	41.54	115.08	133.45	153.12	161.55	305.92
SG43B□□□	No Load rpm	15.1	4.9	4.2	3.7	3.5	1.9
	N-m	8.40	23.26	26.97	30.95	32.65	33.81
	oz-in	1188.8	3293.8	3819.5	4382.4	4623.6	4787.5
	kgf · cm	85.67	237.36	275.24	315.81	333.19	345.00
SG44B□□□	No Load rpm	15.5	5.1	4.4	3.8	3.6	1.9
	N-m	10.94	30.31	33.81	33.81	33.81	33.81
	oz-in	1549.2	4292.0	4787.5	4787.5	4787.5	4787.5
	kgf · cm	111.64	309.29	345.00	345.00	345.00	345.00
SG45B□□□	No Load rpm	16.0	5.2	4.5	3.9	3.7	2.0
	N-m	12.47	33.81	33.81	33.81	33.81	33.81
	oz-in	1765.3	4787.5	4787.5	4787.5	4787.5	4787.5
	kgf · cm	127.21	345.00	345.00	345.00	345.00	345.00
SG46B□□□	No Load rpm	12.4	4.0	3.5	3.0	2.9	1.5
	N-m	17.30	33.81	33.81	33.81	33.81	33.81
	oz-in	2449.8	4787.5	4787.5	4787.5	4787.5	4787.5
	kgf · cm	176.54	345.00	345.00	345.00	345.00	345.00

※ 기타 감속비는 별도 협의(Please contact our sales Department regarding other gear ratio.)

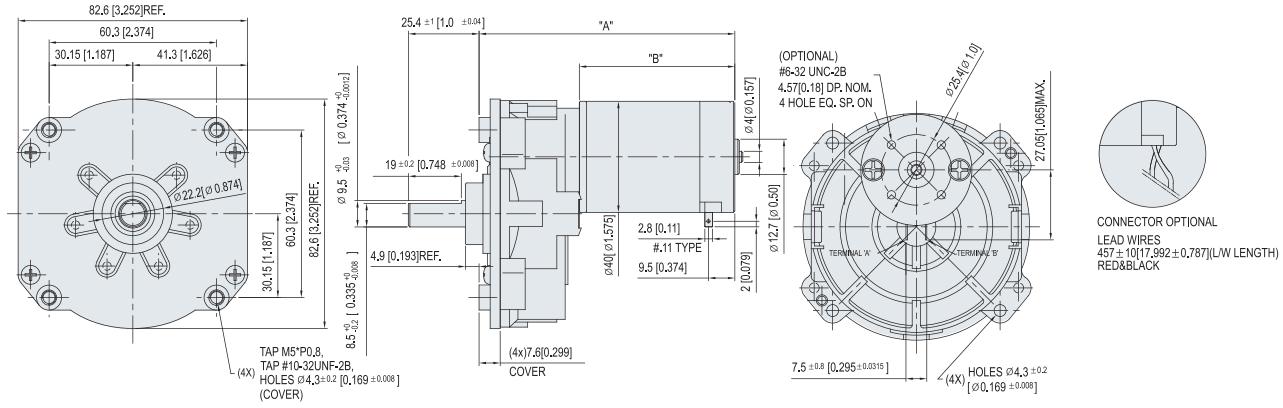
COMPACT TYPE

SP SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
SP42□□□□	82.5 [3.248]	46.4 [1.827]
SP43□□□□	92.1 [3.626]	56.0 [2.205]
SP44□□□□	97.2 [3.827]	61.1 [2.406]

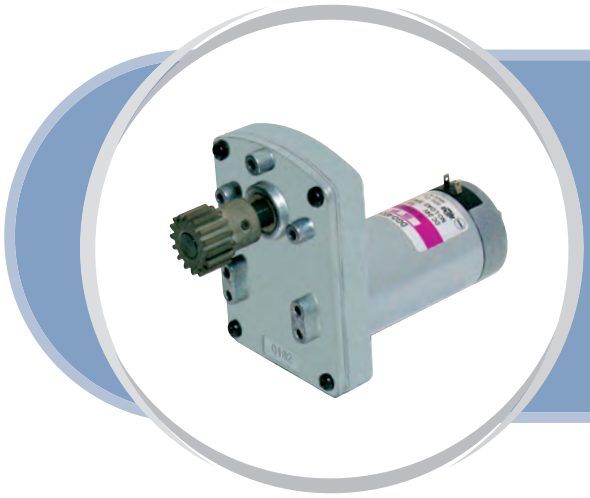
MODEL NO.	"A"	"B"
SP45□□□□	104.8 [4.126]	68.7 [2.705]
SP46□□□□	113.7 [4.476]	77.6 [3.055]

PERMISSIBLE TORQUE OF GEAR BOX

(Voltage : DC 24V)

TYPE	GEAR RATIO	32.4	73.5	148.8	253	747.5	3105.2
SP42B□□□	No Load rpm	216.5	95.4	47.1	27.7	9.4	2.3
	N-m	0.37	0.84	1.53	2.60	6.92	11.27
	oz-in	52.5	118.9	216.8	368.6	980.0	1595.8
	kgf · cm	3.78	8.57	15.62	26.56	70.62	115.00
SP43B□□□	No Load rpm	185.0	81.5	40.3	23.7	8.0	1.9
	N-m	0.76	1.73	3.16	5.37	11.27	11.27
	oz-in	108.1	245.3	447.1	760.2	1595.8	1595.8
	kgf · cm	7.79	17.68	32.22	54.78	115.00	115.00
SP44B□□□	No Load rpm	189.8	83.7	41.3	24.3	8.2	2.0
	N-m	1.00	2.03	4.11	7.00	11.27	11.27
	oz-in	141.0	287.8	582.5	990.5	1595.8	1595.8
	kgf · cm	10.16	20.74	41.98	71.38	115.00	115.00
SP45B□□□	No Load rpm	195.9	86.4	42.7	25.1	8.5	2.0
	N-m	1.13	2.57	4.69	7.97	11.27	11.27
	oz-in	160.6	364.3	663.9	1128.7	1595.8	1595.8
	kgf · cm	11.57	26.25	47.84	81.34	115.00	115.00
SP46B□□□	No Load rpm	151.7	66.9	33.0	19.4	6.6	1.6
	N-m	1.57	3.57	6.51	11.06	11.27	11.27
	oz-in	222.9	505.7	921.3	1566.4	1595.8	1595.8
	kgf · cm	16.06	36.44	66.39	112.88	115.00	115.00

※ 기타 감속비는 별도 협의(Please contact our sales Department regarding other gear ratio.)

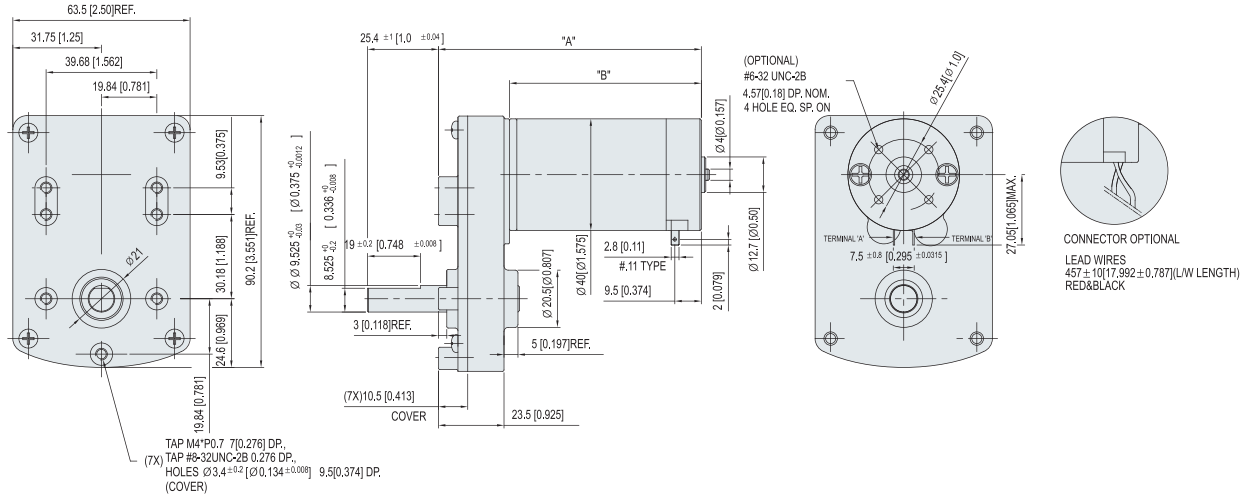


COMPACT TYPE

SR SERIES GEARED MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
SR42□□□□	71.9 [2.831]	46.4 [1.827]
SR43□□□□	81.5 [3.209]	56.0 [2.205]
SR44□□□□	86.6 [3.409]	61.1 [2.406]

MODEL NO.	"A"	"B"
SR45□□□□	94.2 [3.709]	68.7 [2.705]
SR46□□□□	103.1 [4.059]	77.6 [3.055]

PERMISSIBLE TORQUE OF GEAR BOX

(Voltage : DC 24V)

TYPE	GEAR RATIO	58.8	62.5	124.9	144	192
SR42B□□□	No Load rpm	119.3	112.2	56.2	48.7	36.5
	N-m	0.75	0.79	1.43	1.65	2.19
	oz-in	105.7	112.4	202.2	233.1	310.7
	kgf · cm	7.62	8.10	14.57	16.80	22.39
SR43B□□□	No Load rpm	101.9	95.9	48.0	41.6	31.2
	N-m	1.54	1.64	2.94	3.39	4.53
	oz-in	218.1	231.9	417.0	480.7	641.0
	kgf · cm	15.72	16.71	30.05	34.64	46.19
SR44B□□□	No Load rpm	104.6	98.4	49.2	42.7	32.0
	N-m	2.01	2.13	3.84	4.42	5.90
	oz-in	284.2	302.1	543.3	626.4	835.2
	kgf · cm	20.48	21.77	39.15	45.14	60.19
SR45B□□□	No Load rpm	108.0	101.6	50.8	44.1	33.1
	N-m	2.29	2.43	4.37	5.04	6.72
	oz-in	323.9	344.3	619.2	713.8	951.7
	kgf · cm	23.34	24.81	44.62	51.44	68.58
SR46B□□□	No Load rpm	83.6	78.7	39.4	34.1	25.6
	N-m	3.17	3.37	6.07	7.00	9.33
	oz-in	449.5	477.8	859.3	990.5	1320.8
	kgf · cm	32.39	34.43	61.92	71.38	95.18

※ 기타 감속비는 별도 협의(Please contact our sales Department regarding other gear ratio.)

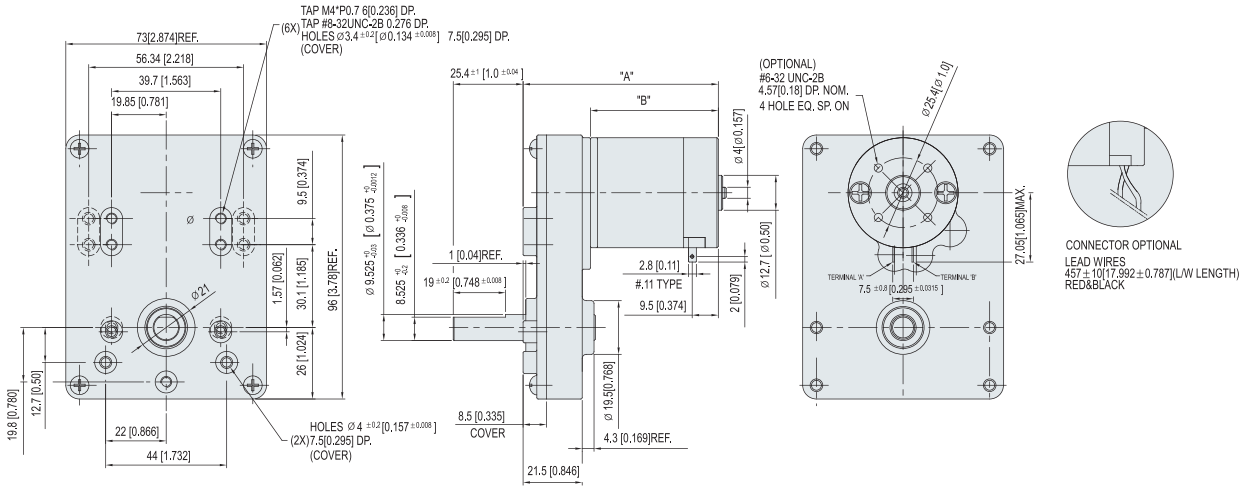
COMPACT TYPE

SQ SERIES GEARED MOTOR



MOTOR DIMENSION

UNIT : mm[inch]



MODEL NO.	"A"	"B"
SQ42□□□□	70.9 [2.791]	46.4 [1.827]
SQ43□□□□	80.5 [3.169]	56.0 [2.205]
SQ44□□□□	85.6 [3.370]	61.1 [2.406]

MODEL NO.	"A"	"B"
SQ45□□□□	93.2 [3.669]	68.7 [2.705]
SQ46□□□□	102.1 [4.020]	77.6 [3.055]

PERMISSIBLE TORQUE OF GEAR BOX

(Voltage : DC 24V)

TYPE	GEAR RATIO	38.5	68.4	144	169	192.1	225	444	517.6	844.8	1240.2
SQ42B□□□	No Load rpm	182.2	102.6	48.7	41.5	36.5	31.2	15.8	13.6	8.3	5.7
	N-m	0.44	0.78	1.65	1.93	2.20	2.57	4.57	5.33	8.69	12.76
	oz-in	62.3	110.7	233.1	273.5	311.0	364.1	646.7	754.1	1230.6	1806.6
	kgf · cm	4.49	7.98	16.80	19.71	22.41	26.24	46.60	54.34	88.68	130.19
SQ43B□□□	No Load rpm	155.7	87.6	41.6	35.5	31.2	26.6	13.5	11.6	7.1	4.8
	N-m	0.91	1.61	3.39	3.98	4.53	5.30	9.42	10.98	14.21	14.21
	oz-in	128.5	228.3	480.7	564.2	641.2	751.2	1334.0	1555.2	2012.1	2012.1
	kgf · cm	9.26	16.45	34.64	40.66	46.21	54.13	96.13	112.07	145.00	145.00
SQ44B□□□	No Load rpm	159.8	89.9	42.7	36.4	32.0	27.3	13.9	11.9	7.3	5.0
	N-m	1.18	2.10	4.42	5.19	5.90	6.91	12.28	14.21	14.21	14.21
	oz-in	167.5	297.5	626.4	735.2	835.7	978.7	1738.2	2012.1	2012.1	2012.1
	kgf · cm	12.07	21.44	45.14	52.98	60.22	70.53	125.26	145.00	145.00	145.00
SQ45B□□□	No Load rpm	164.9	92.8	44.1	37.6	33.0	28.2	14.3	12.3	7.5	5.1
	N-m	1.35	2.39	5.04	5.92	6.72	7.88	13.99	14.21	14.21	14.21
	oz-in	190.8	339.0	713.8	837.7	952.2	1115.3	1980.8	2012.1	2012.1	2012.1
	kgf · cm	13.75	24.43	51.44	60.37	68.62	80.37	142.74	145.00	145.00	145.00
SQ46B□□□	No Load rpm	127.7	71.9	34.1	34.1	25.6	21.8	11.1	9.5	5.8	4.0
	N-m	1.87	3.32	7.00	8.21	9.33	10.93	14.21	14.21	14.21	14.21
	oz-in	264.9	470.6	990.5	1162.6	1321.5	1547.8	2012.1	2012.1	2012.1	2012.1
	kgf · cm	19.09	33.91	71.38	83.78	95.23	111.54	145.00	145.00	145.00	145.00

※ 기타 감속비는 별도 협의(Please contact our sales Department regarding other gear ratio.)

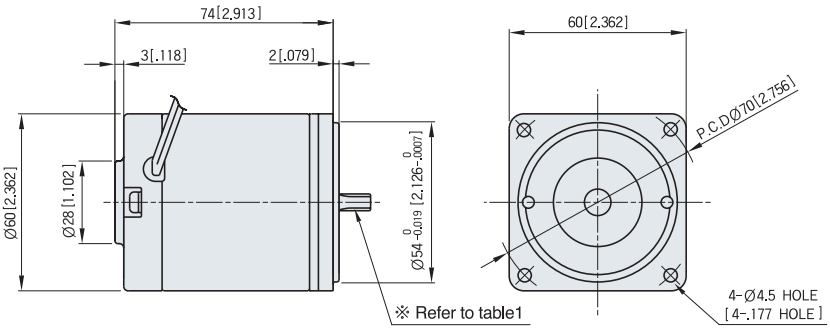


STANDARD TYPE

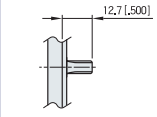
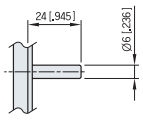
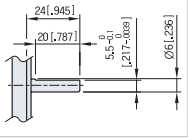
S6D SERIES [6~10W]

MOTOR DIMENSION

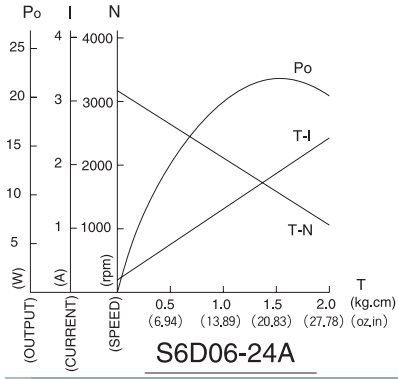
UNIT : mm[inch]



▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

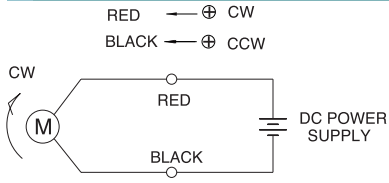
MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE
	S6D06-□A S6D10-□A	S6D06-□S S6D10-□S	S6D06-□D S6D10-□D
출력축 구분 (TYPE OF OUTPUT SHAFT)			

CHARACTERISTIC CURVE



S6D06-24A

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

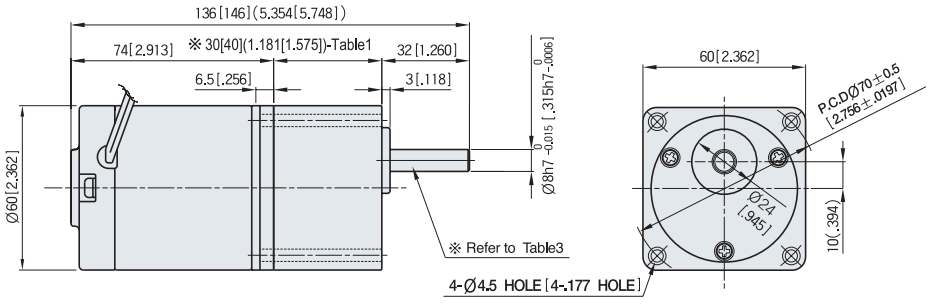
Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S6D06-12□	12	6	3100	0.70	2800	0.021	N-m	0.80	2000	0.6
						2.9	oz-in			
						0.21	kgf · cm			
S6D06-24□	24	6	3200	0.40	2950	0.020	N-m	0.50	2000	0.6
						2.8	oz-in			
						0.20	kgf · cm			
S6D06-90□	90	6	3000	0.10	2800	0.021	N-m	0.15	2000	0.6
						2.9	oz-in			
						0.21	kgf · cm			
S6D10-12□	12	10	3300	0.90	3000	0.032	N-m	1.60	2000	0.6
						4.6	oz-in			
						0.33	kgf · cm			
S6D10-24□	24	10	3300	0.50	3000	0.032	N-m	0.80	2000	0.6
						4.6	oz-in			
						0.33	kgf · cm			
S6D10-90□	90	10	3300	0.15	3100	0.030	N-m	0.20	2000	0.6
						4.3	oz-in			
						0.31	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

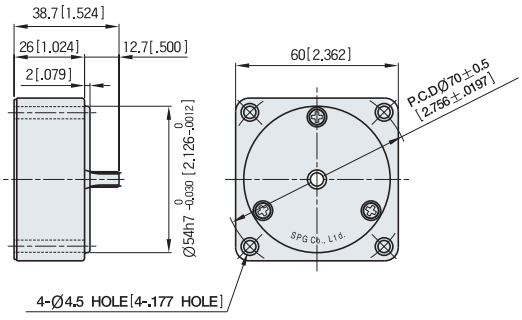
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

▼ GEARED MOTOR ※ MOTOR MODEL : S6D06-□A, S6D10-□A
※ HEAD MODEL : S6□A3□~S6□A250□



▼ INTER-DECIMAL GEAR HEAD
※ MODEL : S6GX10B



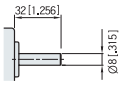
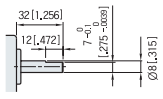
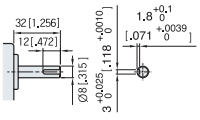
▼ ※30(40) - (표1(Table1))

GEAR RATIO	SIZE:mm[inch]
S6 □ A3 □ ~ S6 □ A18 □	30[1.181]
S6 □ A20 □ ~ S6 □ A250 □	40[1.575]

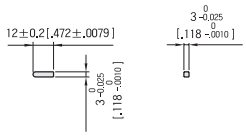
▼ WEIGHT - (표2(Table2))

PART		WEIGHT:kg(oz)
MOTOR		0.6/0.7(21.2/24.7)
DECIMAL GEAR HEAD		0.18(6.3)
GEAR HEAD	S6 □ A3 □ ~ S6 □ A18 □	0.24(8.5)
	S6 □ A20 □ ~ S6 □ A40 □	0.30(10.6)
	S6 □ A50 □ ~ S6 □ A250 □	0.33(11.6)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표3(Table3))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S6SA3 □ ~ S6SA250 □	
D-CUT TYPE	
S6DA3 □ ~ S6DA250 □	
KEY TYPE	
S6KA3 □ ~ S6KA250 □	

▼ KEY SPEC

GEAR HEAD 용


GEAR HEAD RATED LOAD

1. S6D06-24A

MODEL	GEAR RATIO	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	250
	No Load rpm	1067	889	640	533	427	356	320	256	213	178	160	128	107	89	80	64	53	43	36	32	27	21	18	16	13
S6DA□B	N-m	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.20	0.24	0.29	0.29	0.36	0.43	0.51	0.57	0.64	0.77	0.96	1.16	1.29	1.54	1.93	2.31	2.57	2.94
	oz-in	6.7	8.1	11.2	13.5	16.9	20.2	22.5	28.1	33.7	40.5	40.5	50.6	60.7	72.8	80.9	91.0	109.3	136.6	163.9	182.1	218.5	273.1	327.8	364.2	416.3
	kgf · cm	0.5	0.6	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.9	2.9	3.6	4.4	5.2	5.8	6.6	7.9	9.8	11.8	13.1	15.7	19.7	23.6	26.2	30.0

2. S6D10-24A

MODEL	GEAR RATIO	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	250
	No Load rpm	1100	917	660	550	440	367	330	264	220	183	165	132	110	92	83	66	55	44	37	33	28	22	18	17	13
S6DA□B	N-m	0.08	0.09	0.13	0.16	0.20	0.24	0.26	0.33	0.39	0.47	0.47	0.59	0.71	0.85	0.94	1.06	1.27	1.59	1.91	2.12	2.55	2.94	2.94	2.94	2.94
	oz-in	11.1	13.4	18.5	22.3	27.8	33.4	37.1	46.4	55.6	66.8	66.8	83.5	100.2	120.2	133.5	150.2	180.3	225.3	270.4	300.5	360.5	416.3	416.3	416.3	416.3
	kgf · cm	0.8	1.0	1.3	1.6	2.0	2.4	2.7	3.3	4.0	4.8	4.8	6.0	7.2	8.7	9.6	10.8	13.0	16.2	19.5	21.7	26.0	30.0	30.0	30.0	30.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

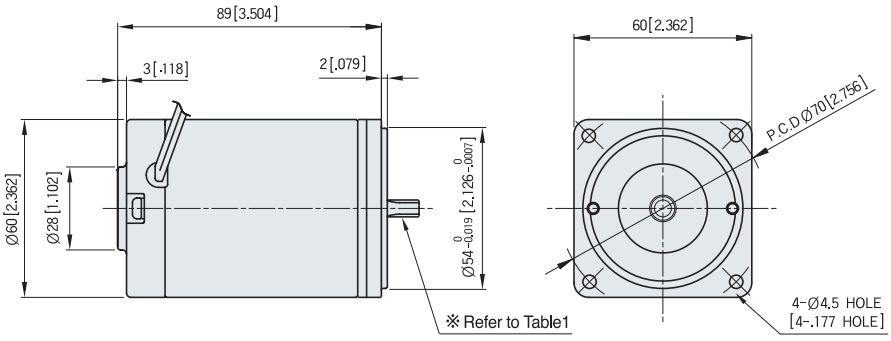


STANDARD TYPE

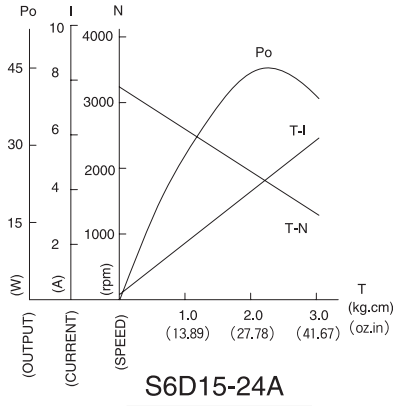
S6D SERIES [15W]

MOTOR DIMENSION

UNIT : mm[inch]

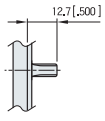
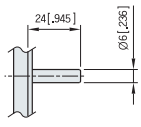
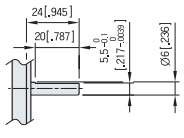


CHARACTERISTIC CURVE

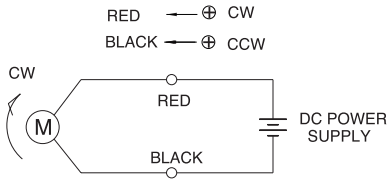


S6D15-24A

▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE
	S6D15-□A	S6D15-□S	S6D15-□D
출력축 구분 (TYPE OF OUTPUT SHAFT)			

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

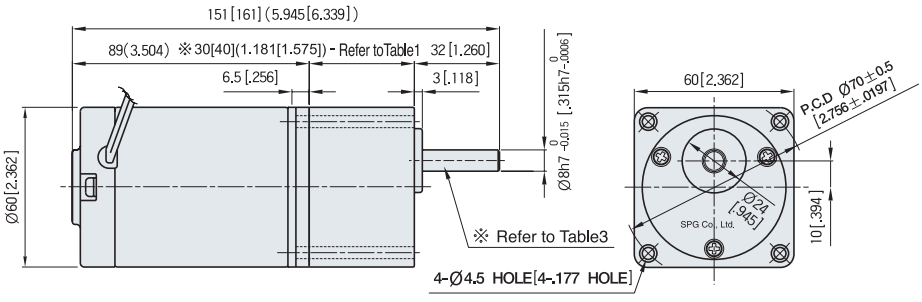
Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S6D15-12□	12	15	3200	0.80	2950	0.049	N-m	2.00	2000	0.6
						6.9	oz-in			
						0.50	kgf · cm			
S6D15-24□	24	15	3300	0.40	3000	0.049	N-m	1.00	2000	0.6
						6.9	oz-in			
						0.50	kgf · cm			
S6D15-90□	90	15	3200	0.20	3000	0.049	N-m	0.30	2000	0.6
						6.9	oz-in			
						0.50	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

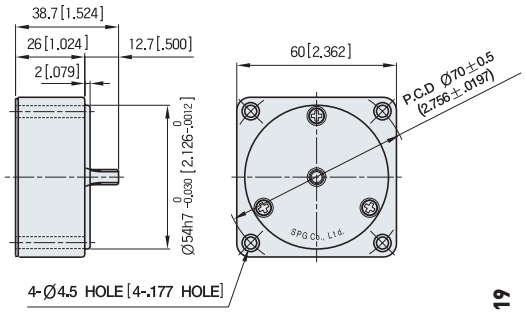
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

▼ GEARED MOTOR ※ MOTOR MODEL : S6D15-□A
※ HEAD MODEL : S6□A3□~S6□A250□



▼ INTER-DECIMAL GEAR HEAD
※ MODEL : S6GX10B



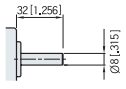
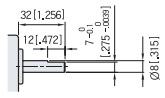
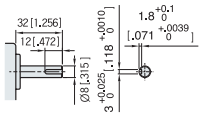
▼ ※30(40) - (표1(Table1))

GEAR RATIO	SIZE:mm[inch]
S6 □ A3 □ ~ S6 □ A18 □	30[1.181]
S6 □ A20 □ ~ S6 □ A250 □	40[1.575]

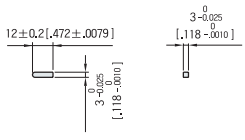
▼ WEIGHT - (표2(Table2))

PART		WEIGHT:kg(oz)
MOTOR		0.9(31.7)
DECIMAL GEAR HEAD		0.18(6.3)
GEAR HEAD	S6 □ A3 □ ~ S6 □ A18 □	0.24(8.5)
	S6 □ A20 □ ~ S6 □ A40 □	0.30(10.6)
	S6 □ A50 □ ~ S6 □ A250 □	0.33(11.6)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표3(Table3))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S6SA3 □ ~ S6SA250 □	
D-CUT TYPE	
S6DA3 □ ~ S6DA250 □	
KEY TYPE	
S6KA3 □ ~ S6KA250 □	

▼ KEY SPEC

GEAR HEAD 용


GEAR HEAD RATED LOAD

S6D15-24A

MODEL	GEAR RATIO	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	250
	No Load rpm	1100	917	660	550	440	367	330	264	220	183	165	132	110	92	83	66	55	44	37	33	28	22	18	17	13
S6DA□B	N-m	0.12	0.14	0.20	0.24	0.30	0.36	0.40	0.50	0.60	0.71	0.71	0.89	1.07	1.29	1.43	1.61	1.93	2.41	2.89	2.94	2.94	2.94	2.94	2.94	2.94
	oz-in	16.9	20.2	28.1	33.7	42.2	50.6	56.2	70.3	84.3	101.2	101.2	126.5	151.7	182.1	202.3	227.6	273.1	341.4	409.7	416.3	416.3	416.3	416.3	416.3	416.3
	kgf · cm	1.2	1.5	2.0	2.4	3.0	3.6	4.1	5.1	6.1	7.3	7.3	9.1	10.9	13.1	14.6	16.4	19.7	24.6	29.5	30.0	30.0	30.0	30.0	30.0	30.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

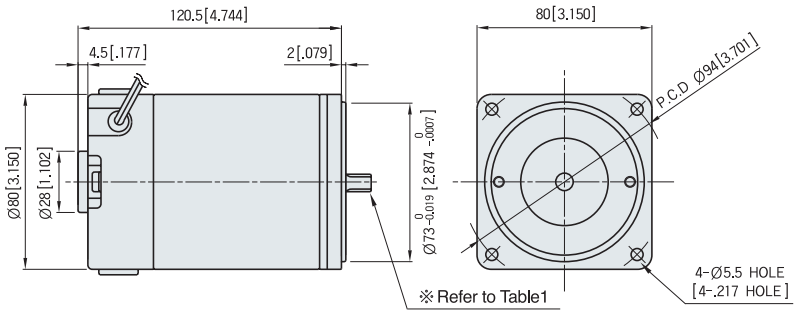


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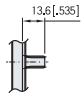
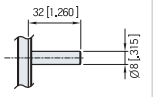
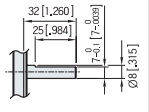
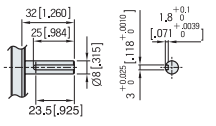
S8D SERIES [25~40W]

MOTOR DIMENSION

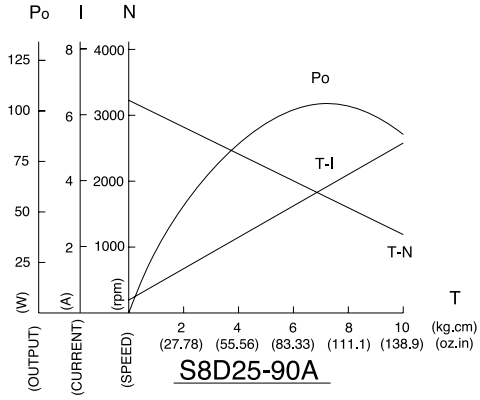
UNIT : mm[inch]



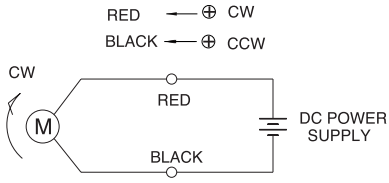
▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S8D25-□A S8D40-□A	S8D25-□S S8D40-□S	S8D25-□D S8D40-□D	S8D25-□K S8D40-□K
출력축 구분 (TYPE OF OUTPUT SHAFT)				

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

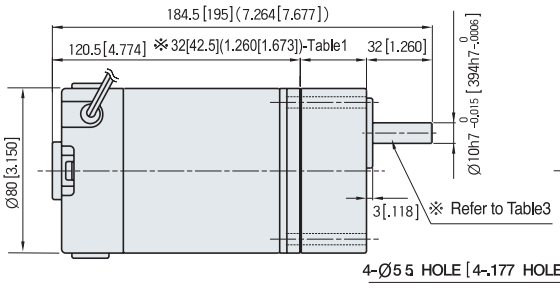
Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S8D25-12□	12	25	3200	1.40	3100	0.078	N-m	3.80	2000	1.7
						11.1	oz-in			
						0.80	kgf · cm			
S8D25-24□	24	25	3000	0.70	2850	0.083	N-m	1.70	2000	1.7
						11.8	oz-in			
						0.85	kgf · cm			
S8D25-90□	90	25	3200	0.20	3000	0.078	N-m	0.50	2000	1.7
						11.1	oz-in			
						0.80	kgf · cm			
S8D40-12□	12	40	3200	2.50	2900	0.132	N-m	7.40	2000	1.7
						18.7	oz-in			
						1.35	kgf · cm			
S8D40-24□	24	40	3100	0.80	3000	0.127	N-m	2.30	2000	1.7
						18.0	oz-in			
						1.30	kgf · cm			
S8D40-90□	90	40	3200	0.30	3000	0.127	N-m	0.70	2000	1.8
						18.0	oz-in			
						1.30	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

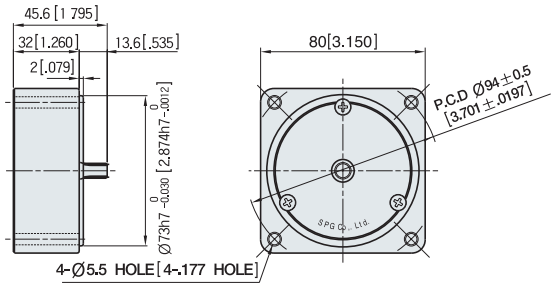
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

▼ GEARED MOTOR ※ MOTOR MODEL : S8D25-□A, S8D40-□A
※ HEAD MODEL : S8□A3□~S8□A200□



▼ INTER-DECIMAL GEAR HEAD
※ MODEL : S8GX10B



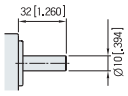
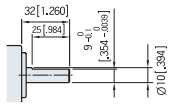
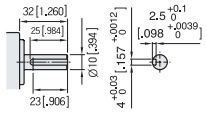
▼ ※30(40) - (표1(Table1))

GEAR RATIO	SIZE:mm[inch]
S8 □ A3 □ ~ S6 □ A18 □	32[1.260]
S8 □ A20 □ ~ S6 □ A250 □	42.5[1.673]

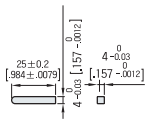
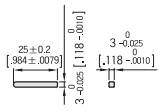
▼ WEIGHT - (표2(Table2))

PART		WEIGHT:kg(oz)
MOTOR		1.7/1.8(60.0/63.5)
DECIMAL GEAR HEAD		0.43(15.2)
GEAR HEAD	S8 □ A3 □ ~ S8 □ A18 □	0.43(15.2)
	S8 □ A20 □ ~ S8 □ A40 □	0.57(20.1)
	S8 □ A50 □ ~ S8 □ A250 □	0.61(21.5)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표3(Table3))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE S8SA3 □ ~ S8SA250 □	
D-CUT TYPE S8DA3 □ ~ S8DA250 □	
KEY TYPE S8KA3 □ ~ S8KA250 □	

▼ KEY SPEC

GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S8D25-90A

MODEL	GEAR RATIO	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
	No Load rpm	1067	889	640	533	427	356	320	256	213	178	160	128	107	89	80	64	53	43	36	32	27	21	18	16
S8KA□B	N-m	0.19	0.23	0.32	0.38	0.48	0.57	0.64	0.79	0.95	1.14	1.14	1.43	1.71	2.06	2.29	2.57	3.09	3.86	4.63	5.14	6.17	7.72	7.84	7.84
	oz-in	27.0	32.4	45.0	54.0	67.4	80.9	89.9	112.4	134.9	161.9	161.9	202.3	242.8	291.3	323.7	364.2	437.0	546.3	655.5	728.4	874.0	1092.5	1110.1	1110.1
	kgf · cm	1.9	2.3	3.2	3.9	4.9	5.8	6.5	8.1	9.7	11.7	11.7	14.6	17.5	21.0	23.3	26.2	31.5	39.4	47.2	52.5	63.0	78.7	80.0	80.0

S8D40-90A

MODEL	GEAR RATIO	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
	No Load rpm	1067	889	640	533	427	356	320	256	213	178	160	128	107	89	80	64	53	43	36	32	27	21	18	16
S8KA□B	N-m	0.31	0.37	0.52	0.62	0.77	0.93	1.03	1.29	1.55	1.86	1.86	2.32	2.79	3.34	3.71	4.18	5.02	6.27	7.52	7.84	7.84	7.84	7.84	7.84
	oz-in	43.8	52.6	73.1	87.7	109.6	131.5	146.1	182.7	219.2	263.0	263.0	328.8	394.5	473.4	526.0	591.8	710.2	887.7	1065.2	1110.1	1110.1	1110.1	1110.1	1110.1
	kgf · cm	3.2	3.8	5.3	6.3	7.9	9.5	10.5	13.2	15.8	19.0	19.0	23.7	28.4	34.1	37.9	42.6	51.2	64.0	76.8	80.0	80.0	80.0	80.0	80.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

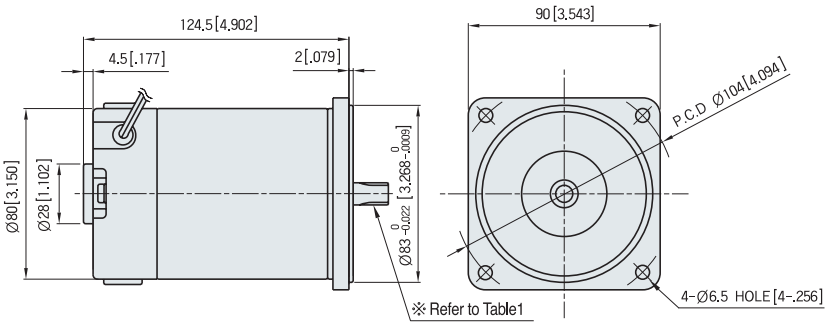


STANDARD TYPE

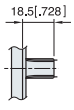
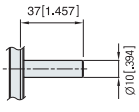
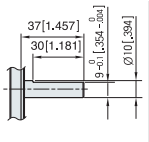
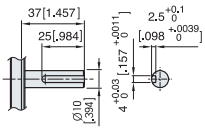
S9D SERIES [40W]

MOTOR DIMENSION

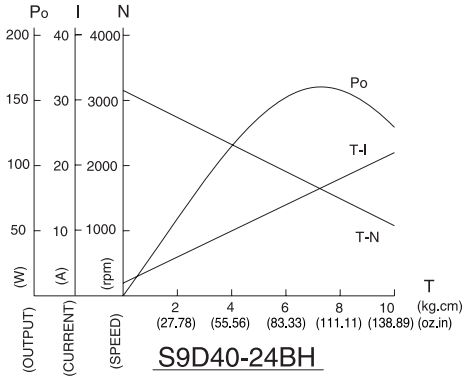
UNIT : mm[inch]



▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

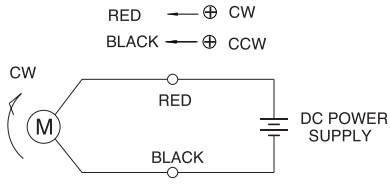
MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D40-□BH	S9D40-□S	S9D40-□D	S9D40-□K
출력축 구분 (TYPE OF OUTPUT SHAFT)				

CHARACTERISTIC CURVE



S9D40-24BH

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

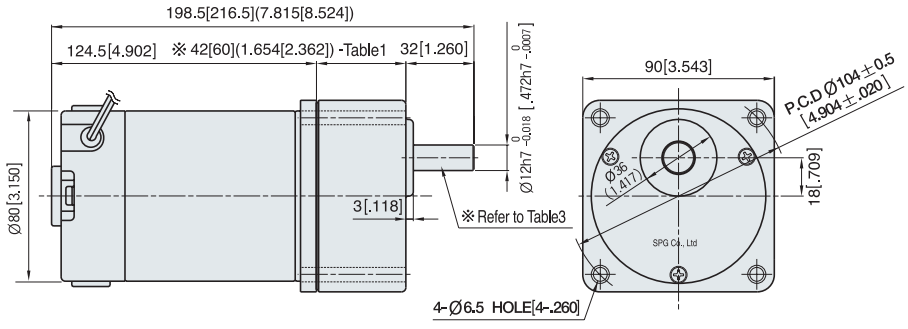
Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D40-12□	12	40	3100	2.5	2800	0.137	N-m	6.0	2000	1.8
						19.4	oz-in			
						1.40	kgf · cm			
S9D40-24□	24	40	3100	1.5	2900	0.132	N-m	3.0	2000	1.8
						18.7	oz-in			
						1.35	kgf · cm			
S9D40-90□	90	40	3200	0.3	3000	0.127	N-m	0.7	2000	1.8
						18.0	oz-in			
						1.30	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

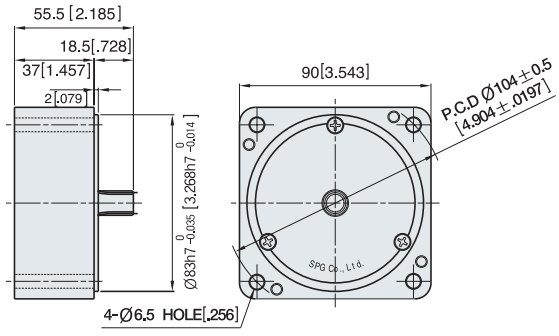
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

▼ GEARED MOTOR ※ MOTOR MODEL : S9□40-□B□
※ HEAD MODEL : S9□B3□□~S9□B200□□



▼ INTER-DECIMAL GEAR HEAD
※ MODEL : S9GX10B(H,L)



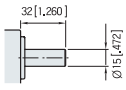
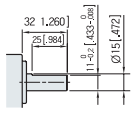
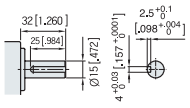
▼ ※30(40) - (표1(Table1))

GEAR RATIO	SIZE:mm[inch]
S9 □ B3□□ ~S9 □ B18 □□	42[1.654]
S9 □ B20 □□ ~S9 □ B200 □□	60[2.362]

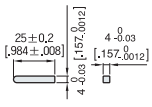
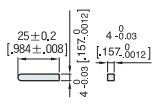
▼ WEIGHT - (표2(Table2))

PART		WEIGHT:kg(oz)
MOTOR		0.6/0.7
DECIMAL GEAR HEAD		0.60(21.2)
GEAR HEAD	S9 □ B3 □□ ~ S9 □ B18 □□	0.73(25.7)
	S9 □ B20 □□ ~ S9 □ B40 □□	1.03(36.3)
	S9 □ B50 □□ ~ S9 □ B200 □□	1.13(39.9)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표3(Table3))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SB3 □□ ~S9SB200 □□	
D-CUT TYPE	
S9DB3 □□ ~S9DB200 □□	
KEY TYPE	
S9KB3 □□ ~S9KB200 □□	

▼ KEY SPEC

GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D40-24BH

MODEL	GEAR RATIO	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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S8KA□B	N-m	0.32	0.39	0.54	0.64	0.80	0.96	1.07	1.34	1.61	1.93	1.93	2.41	2.89	3.47	3.86	4.34	5.21	6.51	7.81	8.68	9.80	9.80	9.80	9.80
	oz-in	45.5	54.6	75.9	91.0	113.8	136.6	151.7	189.7	227.6	273.1	273.1	341.4	409.7	491.6	546.3	614.6	737.5	921.8	1106.2	1229.1	1387.7	1387.7	1387.7	1387.7
	kgf · cm	3.3	3.9	5.5	6.6	8.2	9.8	10.9	13.7	16.4	19.7	19.7	24.6	29.5	35.4	39.4	44.3	53.1	66.4	79.7	88.6	100.0	100.0	100.0	100.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

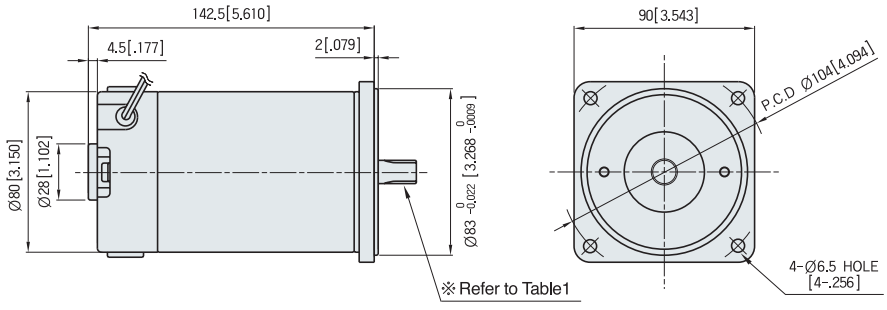


STANDARD TYPE

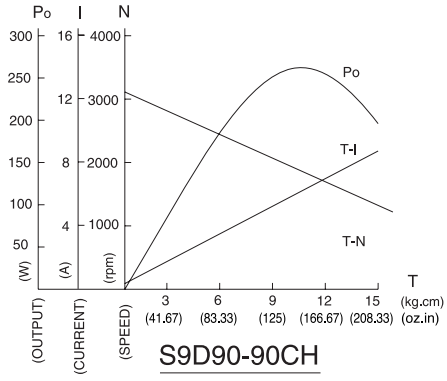
S9D SERIES [60~120W]

MOTOR DIMENSION

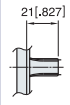
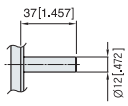
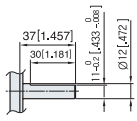
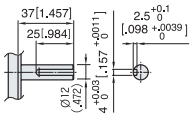
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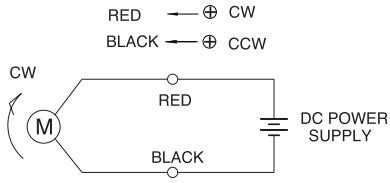
CHARACTERISTIC CURVE



▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D60-□CH S9D90-□CH S9D120-□CH	S9D60-□S S9D90-□S S9D120-□S	S9D60-□D S9D90-□D S9D120-□D	S9D60-□K S9D90-□K S9D120-□K
출력축 구분 (TYPE OF OUTPUT SHAFT)				

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

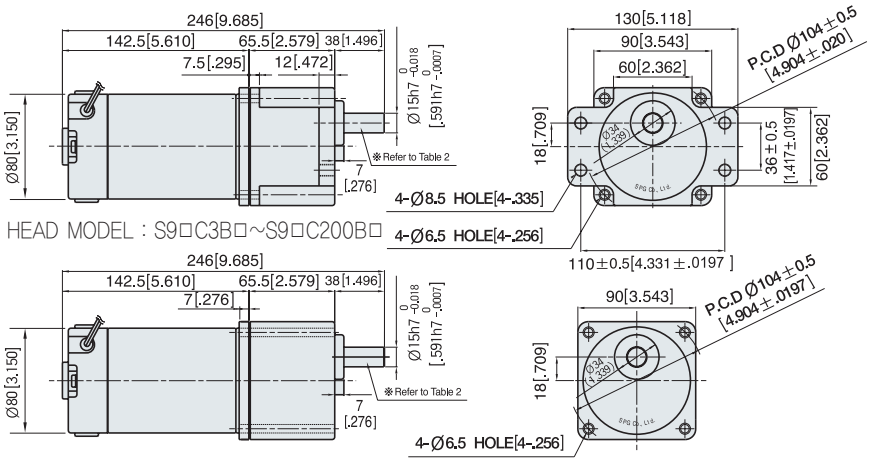
Type	Voltage	Output	No Load		At Rated Load			Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque	Current		
	V	W	RPM	A	RPM		A	Hr	Kg
S9D60-12□	12	60	3000	2.5	2650	0.216 N-m 30.5 oz-in 2.20 kgf · cm	7.9	2000	2.2
S9D60-24□	24	60	3000	1.2	2800	0.206 N-m 29.1 oz-in 2.10 kgf · cm	3.6	2000	2.2
S9D60-90□	90	60	3100	0.3	2900	0.196 N-m 27.8 oz-in 2.00 kgf · cm	1.0	2000	2.2
S9D90-12□	12	90	3100	3.0	2750	0.314 N-m 44.4 oz-in 3.20 kgf · cm	10.5	2000	2.2
S9D90-24□	24	90	3250	2.4	2920	0.304 N-m 43.0 oz-in 3.10 kgf · cm	5.6	2000	2.2
S9D90-90□	90	90	3100	0.3	2800	0.314 N-m 44.4 oz-in 3.20 kgf · cm	1.4	2000	2.2
S9D120-12□	12	120	3300	3.5	2800	0.412 N-m 58.3 oz-in 4.20 kgf · cm	14.9	2000	2.2
S9D120-24□	24	120	3300	2.0	2920	0.392 N-m 55.5 oz-in 4.00 kgf · cm	7.1	2000	2.2
S9D120-90□	90	120	3000	0.3	2600	0.441 N-m 62.4 oz-in 4.50 kgf · cm	2.0	2000	2.2

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

GEARED MOTOR SPECIFICATION

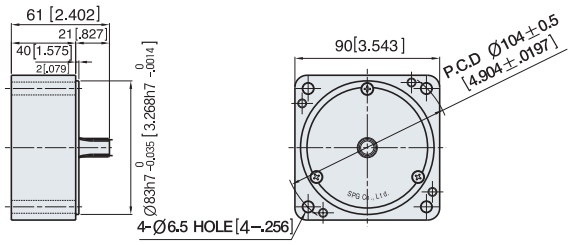
UNIT : mm[inch]

▼ GEARED MOTOR ※ MOTOR MODEL : S9D60-□CH, S9D90-□CH, S9D120-□CH
※ HEAD MODEL : S9□C3B□-S~S9□C200B□-S



※ HEAD MODEL : S9□C3B□~S9□C200B□

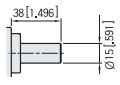
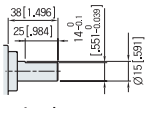
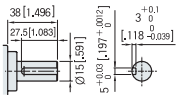
▼ INTER-DECIMAL GEAR HEAD
※ MODEL : S9GX10B(H,L)-S



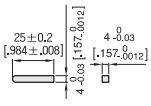
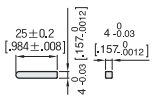
▼ ※30(40) - (표1(Table1))

PART		WEIGHT:kg(oz)
MOTOR		2.2(77.6)
DECIMAL GEAR HEAD		0.65(22.9)
GEAR HEAD	S9 □ C3B □ ~S9 □ C10B □	1.21(42.7)
	S9 □ C12.5B □ ~S9 □ C20B □	1.30(45.9)
	S9 □ C25B □ ~S9 □ C60B□	1.40(49.4)
	S9 □ C75B □ ~S9 □ C200B□	1.45(51.1)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표2(Table2))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SC3BH ~S9SC200BH	
D-CUT TYPE	
S9DC3BH ~S9DC200BH	
KEY TYPE	
S9KC3BH ~S9KC200BH	

▼ KEY SPEC

GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D60-90CH

MODEL	GEAR RATIO	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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S9KC□ B() S9KC□ B()-S	N-m	0.48	0.57	0.79	0.95	1.19	1.43	1.59	1.79	2.14	2.57	2.86	3.21	3.86	4.63	5.14	6.43	7.72	8.68	10.42	11.57	13.89	17.36	19.60	19.60
	oz-in	67.4	80.9	112.4	134.9	168.6	202.3	224.8	252.9	303.5	364.2	404.6	455.2	546.3	655.5	728.4	910.5	1092.5	1229.1	1474.9	1638.8	1966.6	2458.2	2775.4	2775.4
	kgf · cm	4.9	5.8	8.1	9.7	12.2	14.6	16.2	18.2	21.9	26.2	29.2	32.8	39.4	47.2	52.5	65.6	78.7	88.6	106.3	118.1	141.7	177.1	200.0	200.0

S9D90-90CH

MODEL	GEAR RATIO	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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S9KC□ B() S9KC□ B()-S	N-m	0.76	0.91	1.27	1.52	1.91	2.29	2.54	2.86	3.43	4.12	4.57	5.14	6.17	7.41	8.23	10.29	12.35	13.89	16.67	18.52	19.60	19.60	19.60	19.60
	oz-in	107.9	129.5	179.8	215.8	269.8	323.7	359.7	404.6	485.6	582.7	647.4	728.4	874.0	1048.8	1165.4	1456.7	1748.1	1966.6	2359.9	2622.1	2775.4	2775.4	2775.4	2775.4
	kgf · cm	7.8	9.3	13.0	15.6	19.4	23.3	25.9	29.2	35.0	42.0	46.7	52.5	63.0	75.6	84.0	105.0	126.0	141.7	170.1	189.0	200.0	200.0	200.0	200.0

S9D120-90CH

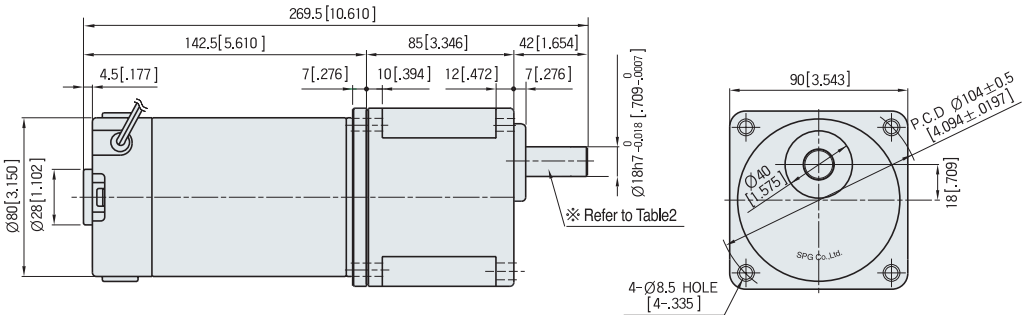
MODEL	GEAR RATIO	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KC□ BH S9KC□ BH-S	N-m	1.07	1.29	1.79	2.14	2.68	3.21	3.57	4.02	4.82	5.79	6.43	7.23	8.68	10.42	11.57	14.47	17.36	19.53	19.60	19.60	19.60	19.60	19.60	19.60
	oz-in	151.7	182.1	252.9	303.5	379.4	455.2	505.8	569.0	682.8	819.4	910.5	1024.3	1229.1	1474.9	1638.8	2048.5	2458.2	2765.5	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4
	kgf · cm	10.9	13.1	18.2	21.9	27.3	32.8	36.5	41.0	49.2	59.0	65.6	73.8	88.6	106.3	118.1	147.6	177.1	199.3	200.0	200.0	200.0	200.0	200.0	200.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다.
(No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

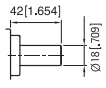
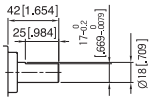
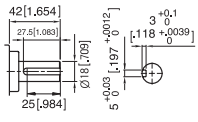
▼ GEARED MOTOR ※ MOTOR MODEL : S9D60-□CH, S9D90-□CH, S9D120-□CH
※ HEAD MODEL : S9□D3B~S9□D200B



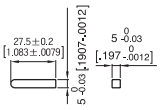
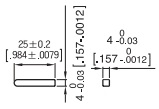
▼ ※30(40) - (표1(Table1))

PART		WEIGHT:kg(oz)
MOTOR		2.2(77.6)
GEAR HEAD	S9 □ D3B ~S9 □ D10B	1.65(58.2)
	S9 □ D12.5B ~S9 □ D20B	1.80(63.5)
	S9 □ D25B ~S9 □ D60B	1.90(67.0)
	S9 □ D75B ~S9 □ D200B	1.95(68.8)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표2(Table2))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SD3B ~S9SD200B	
D-CUT TYPE	
S9DD3B □□ ~S9DD200B □□	
KEY TYPE	
S9KD3B □□ ~S9KD200B □□	

▼ KEY SPEC

GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D60-90CH

MODEL	GEAR RATIO	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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S9KD□ B	N-m	0.48	0.57	0.79	0.95	1.19	1.43	1.59	1.79	2.14	2.57	2.86	3.21	3.86	4.63	5.14	6.43	7.72	8.68	10.42	11.57	13.89	17.36	20.83	23.15
	oz-in	67.4	80.9	112.4	134.9	168.6	202.3	224.8	252.9	303.5	364.2	404.6	455.2	546.3	655.5	728.4	910.5	1092.5	1229.1	1474.9	1638.8	1966.6	2458.2	2949.9	3277.6
	kgf · cm	4.9	5.8	8.1	9.7	12.2	14.6	16.2	18.2	21.9	26.2	29.2	32.8	39.4	47.2	52.5	65.6	78.7	88.6	106.3	118.1	141.7	177.1	212.6	236.2

S9D90-90CH

MODEL	GEAR RATIO	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
	No Load rpm	1033	861	620	517	413	344	310	248	207	172	155	124	103	86	78	62	52	41	34	31	26	21	17	16
S9KD□ B	N-m	0.76	0.91	1.27	1.52	1.91	2.29	2.54	2.86	3.43	4.12	4.57	5.14	6.17	7.41	8.23	10.29	12.35	13.89	16.67	18.52	22.22	27.78	29.40	29.40
	oz-in	107.9	129.5	179.8	215.8	269.8	323.7	359.7	404.6	485.6	582.7	647.4	728.4	874.0	1048.8	1165.4	1456.7	1748.1	1966.6	2359.9	2622.1	3146.5	3933.2	4163.0	4163.0
	kgf · cm	7.8	9.3	13.0	15.6	19.4	23.3	25.9	29.2	35.0	42.0	46.7	52.5	63.0	75.6	84.0	105.0	126.0	141.7	170.1	189.0	226.7	283.4	300.0	300.0

S9D120-90CH

MODEL	GEAR RATIO	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
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KD□ B	N-m	1.07	1.29	1.79	2.14	2.68	3.21	3.57	4.02	4.82	5.79	6.43	7.23	8.68	10.42	11.57	14.47	17.36	19.53	23.44	26.04	29.40	29.40	29.40	29.40
	oz-in	151.7	182.1	252.9	303.5	379.4	455.2	505.8	569.0	682.8	819.4	910.5	1024.3	1229.1	1474.9	1638.8	2048.5	2458.2	2765.5	3318.6	3687.4	4163.0	4163.0	4163.0	4163.0
	kgf · cm	10.9	13.1	18.2	21.9	27.3	32.8	36.5	41.0	49.2	59.0	65.6	73.8	88.6	106.3	118.1	147.6	177.1	199.3	239.1	265.7	300.0	300.0	300.0	300.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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.)
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(No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

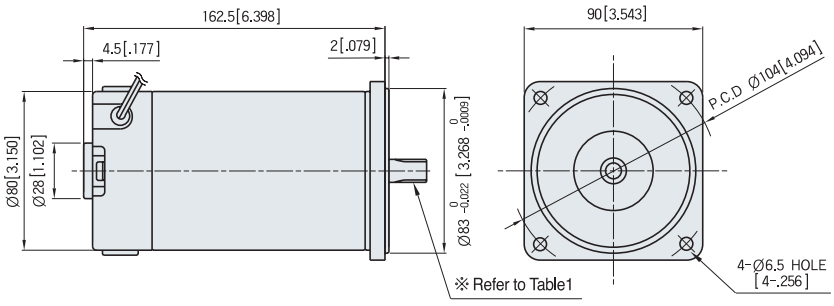
STANDARD TYPE

S9D SERIES [150W]

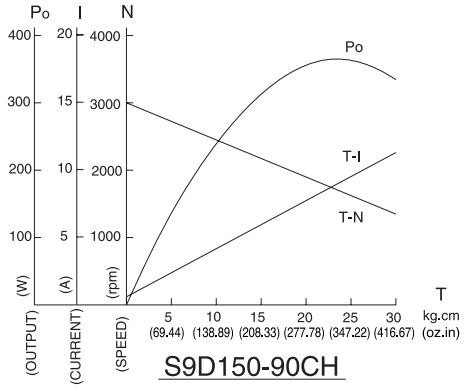


MOTOR DIMENSION

UNIT : mm[inch]

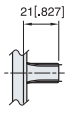
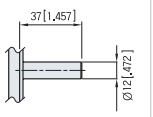
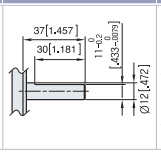
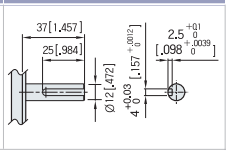


CHARACTERISTIC CURVE

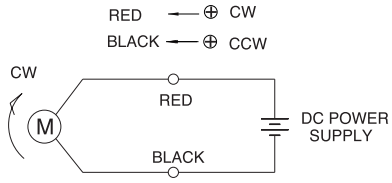


S9D150-90CH

▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D150-□CH	S9D150-□S	S9D150-□D	S9D150-□K
출력축 구분 (TYPE OF OUTPUT SHAFT)				

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D150-12□	12	150	3200	3.0	2560	0.559	N-m	20	2000	2.8
						79.1	oz-in			
						5.70	kgf · cm			
S9D150-24□	24	150	3000	2.0	2650	0.539	N-m	8.5	2000	2.8
						76.3	oz-in			
						5.50	kgf · cm			
S9D150-90□	90	150	3000	0.5	2650	0.539	N-m	2.2	2000	2.8
						76.3	oz-in			
						5.50	kgf · cm			

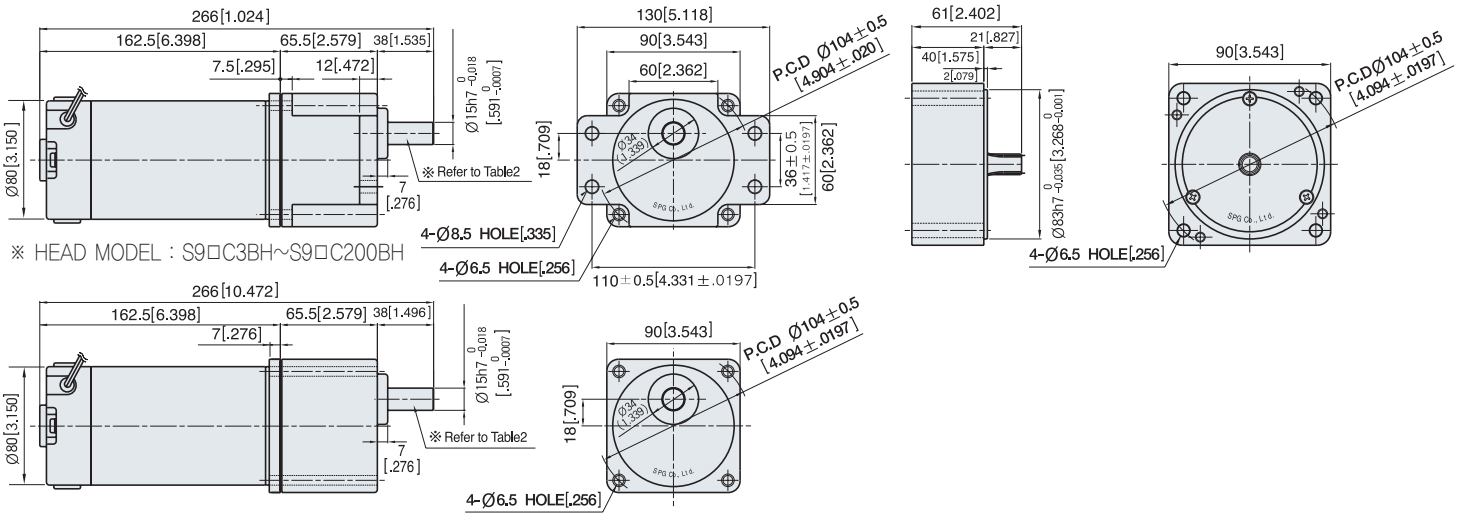
※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

▼ GEARED MOTOR ※ MOTOR MODEL : S9D150-□CH
※ HEAD MODEL : S9□C3BH-S~S9□C200BH-S

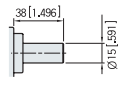
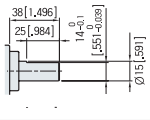
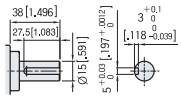
▼ INTER-DECIMAL GEAR HEAD
※ MODEL : S9GX10BH-S



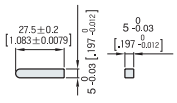
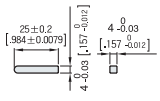
▼ ※30(40) - (표1(Table1))

PART		WEIGHT:kg(oz)
MOTOR		2.8(98.8)
DECIMAL GEAR HEAD		0.65(22.9)
GEAR HEAD	S9 □ C3BH ~S9 □ C10BH	1.21(42.7)
	S9 □ C12.5BH ~S9 □ C20BH	1.30(45.9)
	S9 □ C25BH ~S9 □ C60BH	1.40(49.4)
	S9 □ C75BH ~S9 □ C200BH	1.45(51.1)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표2(Table2))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SC3BH ~S9SC200BH	
D-CUT TYPE	
S9DC3BH ~S9DC200BH	
KEY TYPE	
S9KC3BH ~S9KC200BH	

▼ KEY SPEC

GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D150-90CH

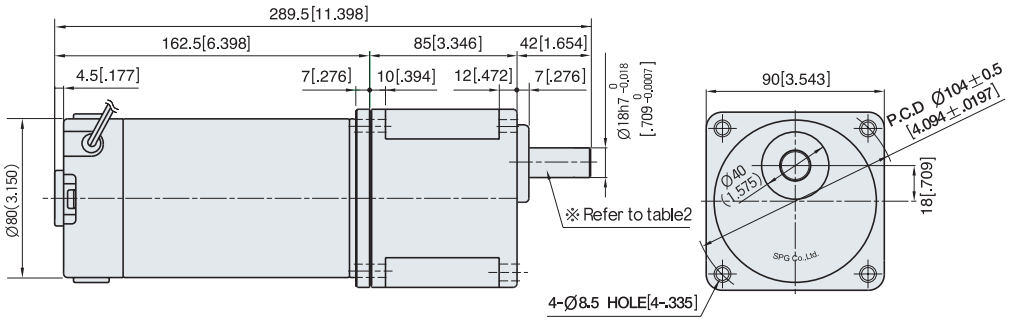
MODEL	GEAR RATIO	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KC□ BH S9KC□ BH-S	N-m	1.31	1.57	2.18	2.62	3.27	3.93	4.37	4.91	5.89	7.07	7.86	8.84	10.61	12.73	14.15	17.68	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60
	oz-in	185.5	222.6	309.1	370.9	463.7	556.4	618.2	695.5	834.6	1001.5	1112.8	1251.9	1502.3	1802.7	2003.0	2503.8	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4	2775.4
	kgf · cm	13.4	16.0	22.3	26.7	33.4	40.1	44.6	50.1	60.1	72.2	80.2	90.2	108.3	129.9	144.3	180.4	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

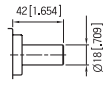
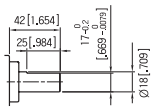
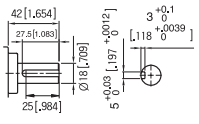
▼ GEARED MOTOR ※ MOTOR MODEL : S9D150-□CH
※ HEAD MODEL : S9□D3B~S9□D200B



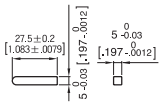
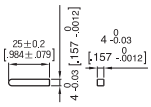
▼ ※30(40) - (표1(Table1))

PART		WEIGHT:kg(oz)
MOTOR		2.2(77.6)
GEAR HEAD	S9 □ D3B ~S9 □ D10B	1.65(58.2)
	S9 □ D12.5B ~S9 □ D20B	1.80(63.5)
	S9 □ D25B ~S9 □ D60B	1.90(67.0)
	S9 □ D75B ~S9 □ D200B	1.95(68.8)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표2(Table2))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SD3B ~S9SD200B	
D-CUT TYPE	
S9DD3B ~S9DD200B	
KEY TYPE	
S9KD3B ~S9KD200B	

▼ KEY SPEC

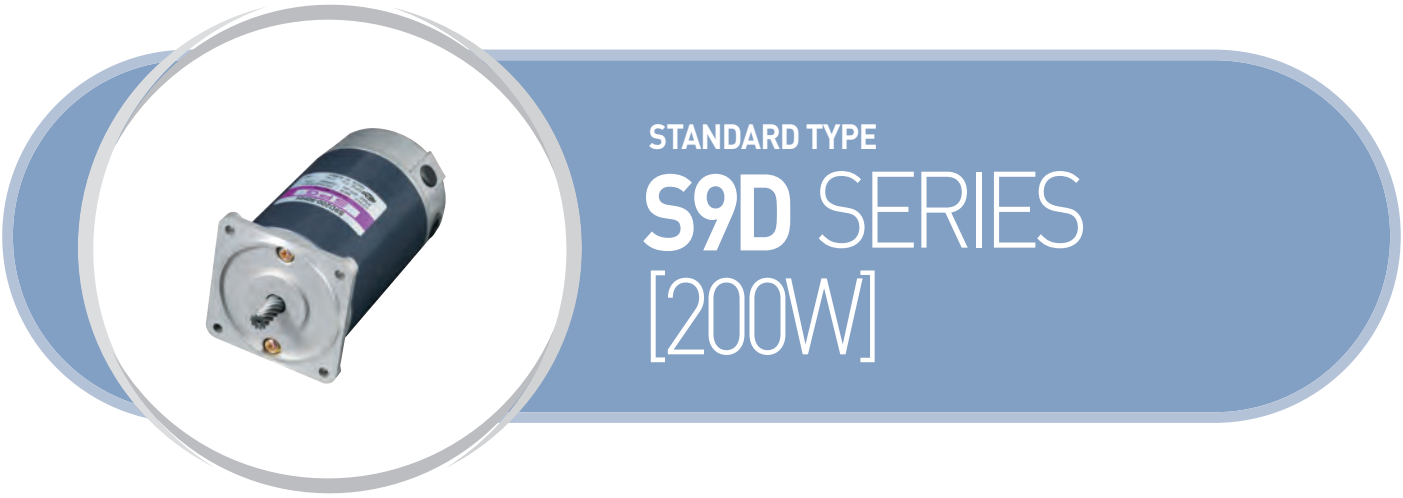
GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D150-90CH

MODEL	GEAR RATIO	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
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KD□ B S9KD□ B-S	N-m	1.31	1.57	2.18	2.62	3.27	3.93	4.37	4.91	5.89	7.07	7.86	8.84	10.61	12.73	14.15	17.68	21.22	23.87	28.64	29.40	29.40	29.40	29.40	29.40
	oz-in	85.5	222.6	309.1	370.9	463.7	556.4	618.2	695.5	834.6	1001.5	1112.8	1251.9	1502.3	1802.7	2003.0	2503.8	3004.5	3380.1	4056.1	4163.0	4163.0	4163.0	4163.0	4163.0
	kgf · cm	13.4	16.0	22.3	26.7	33.4	40.1	44.6	50.1	60.1	72.2	80.2	90.2	108.3	129.9	144.3	180.4	216.5	243.6	292.3	300.0	300.0	300.0	300.0	300.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · ㎝.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다.
(No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

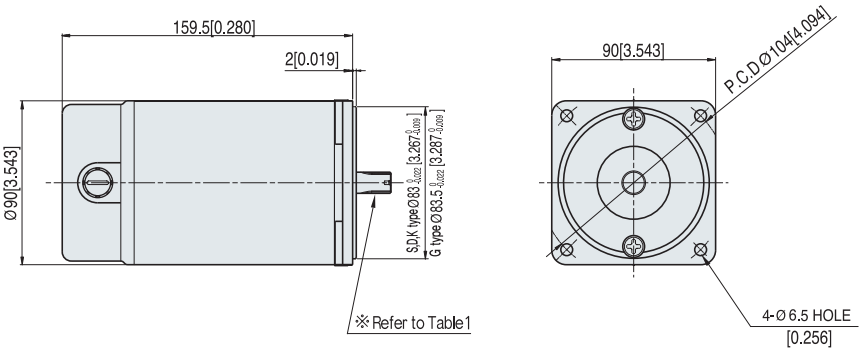


STANDARD TYPE

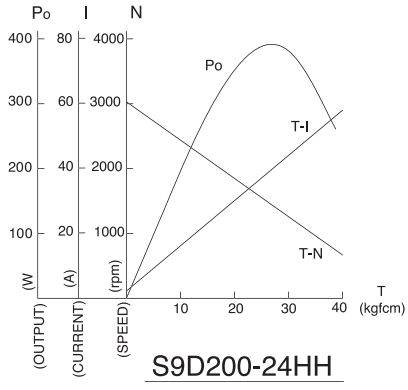
S9D SERIES [200W]

MOTOR DIMENSION

UNIT : mm[inch]

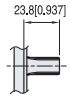
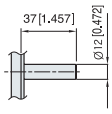
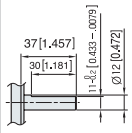
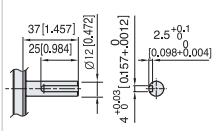


CHARACTERISTIC CURVE

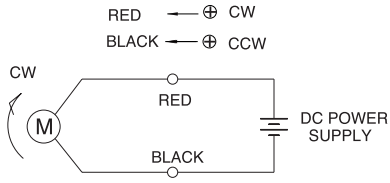


S9D200-24HH

▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D200-□HH	S9D200-□S	S9D200-□D	S9D200-□K
출력축 구분 (TYPE OF OUTPUT SHAFT)				

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

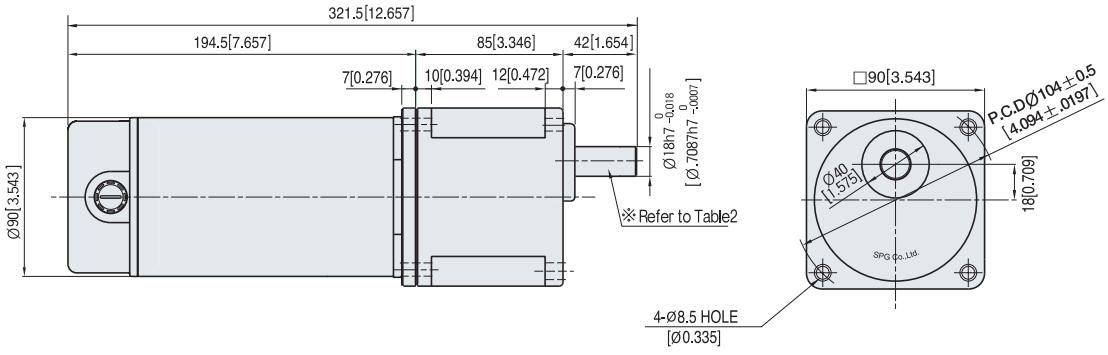
Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D200-12□	12	200	3050	3.2	2260	0.843	N-m	27.0	2000	4.5
						119.3	oz-in			
						8.60	kgf · cm			
S9D200-24□	24	200	3050	2.0	2600	0.735	N-m	12.0	2000	4.5
						104.1	oz-in			
						7.50	kgf · cm			
S9D200-90□	90	200	3050	0.5	2670	0.715	N-m	2.8	2000	4.5
						101.3	oz-in			
						7.30	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

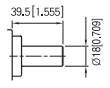
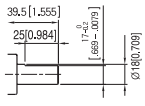
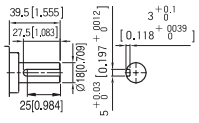
▼ GEARED MOTOR ※ MOTOR MODEL : S9D200-□HH
※ HEAD MODEL : S9□H3B~S9□H200B



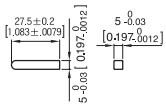
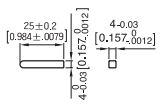
▼ ※30(40) - (표1(Table1))

PART		WEIGHT:kg(oz)
MOTOR		5.0(176.4)
GEAR HEAD	S9 □ H3B ~S9 □ H10B	1.65(58.2)
	S9 □ H12.5B ~S9 □ H20B	1.80(63.5)
	S9 □ H25B ~S9 □ H60B	1.90(67.0)
	S9 □ H75B ~S9 □ H200B	1.95(68.8)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표3(Table3))

MODEL	출력축 구분(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SH3B ~S9SH200B	
D-CUT TYPE	
S9DH3B ~S9DH200B	
KEY TYPE	
S9KH3B ~S9KH200B	

▼ KEY SPEC

GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D200-90HH

MODEL	GEAR RATIO	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
	No Load rpm	1017	847	610	508	407	339	305	244	203	169	153	122	102	85	76	61	51	41	34	31	25	20	17	15
S9KH□B	N-m	1.74	2.09	2.90	3.48	4.35	5.22	5.79	6.52	7.82	9.39	10.43	10.56	14.08	16.90	18.77	23.47	28.16	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	oz-in	246.2	295.4	410.3	492.3	615.4	738.5	820.5	923.1	1107.7	1329.3	1477.0	1495.4	1993.9	2392.7	2658.5	3323.2	3987.8	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0
	kgf · cm	17.7	21.3	29.6	35.5	44.3	53.2	59.1	66.5	79.8	95.8	106.4	107.8	143.7	172.4	191.6	239.5	287.4	300.0	300.0	300.0	300.0	300.0	300.0	300.0

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■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · ㎝.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다.
(No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

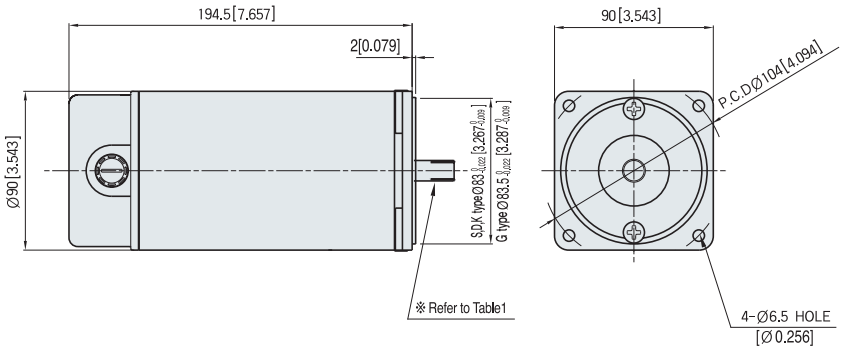


STANDARD TYPE

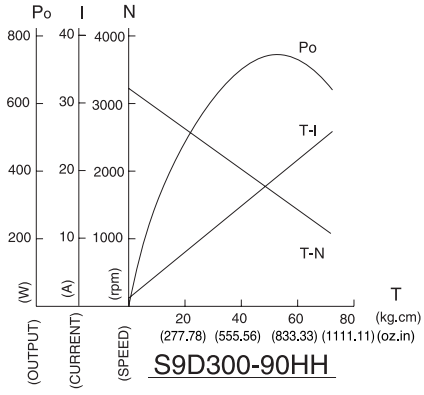
S9D SERIES [300W]

MOTOR DIMENSION

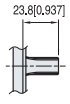
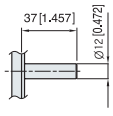
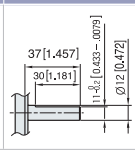
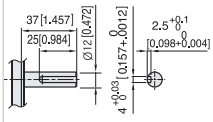
UNIT : mm[inch]



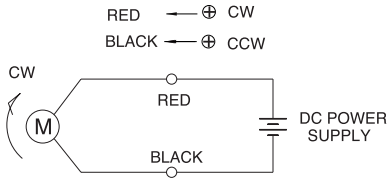
CHARACTERISTIC CURVE



▼ MOTOR 출력축 사양(SPEC for output shaft of motor) – (표1(Table1))

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D300-□HH	S9D300-□S	S9D300-□D	S9D300-□K
출력축 구분 (TYPE OF OUTPUT SHAFT)				

CIRCUIT DIAGRAM



회전방향은 MOTOR의 SHAFT 끝 쪽에서 볼때의 회전방향입니다.
(The direction of motor rotation is as viewed from the front shaft end of the motor)

MOTOR SPECIFICATION

(Voltage : DC 24V)

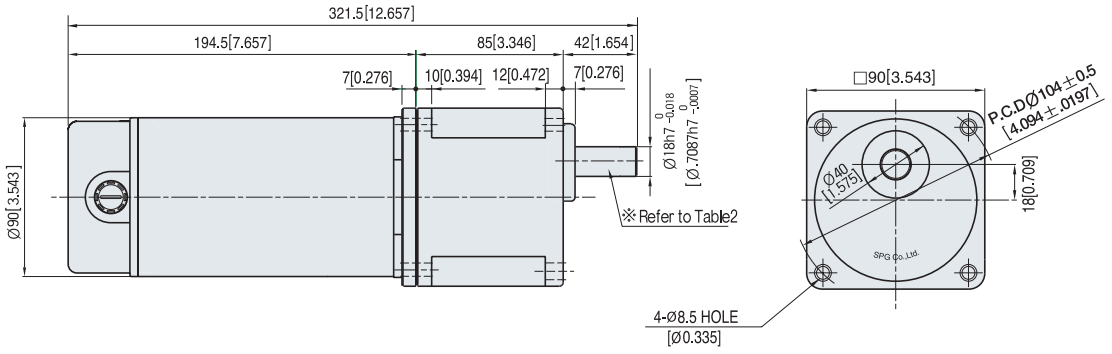
Type	Voltage	Output	No Load		At Rated Load				Run Duty	Weight
			Speed	Current(MAX.)	Speed	Torque		Current		
	V	W	RPM	A	RPM			A	Hr	Kg
S9D300-24□	24	300	3000	1.4	2520	1.137	N-m	13.9	2000	4.7
						161.0	oz-in			
						11.60	kgf · cm			
S9D300-90□	90	300	3000	0.5	2700	1.058	N-m	4.2	2000	4.7
						149.9	oz-in			
						10.80	kgf · cm			

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

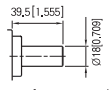
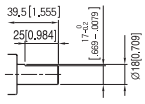
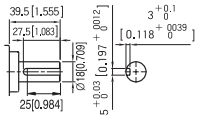
▼ GEARED MOTOR ※ MOTOR MODEL : S9D300-□HH
※ HEAD MODEL : S9□H3B~S9□H200B



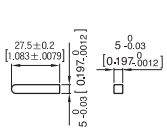
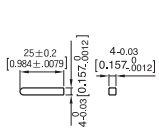
▼ ※30(40) - (표1(Table1))

PART		WEIGHT:kg(oz)
MOTOR		5.0(176.4)
GEAR HEAD	S9 □ H3B ~S9 □ H10B	1.65(58.2)
	S9 □ H12.5B ~S9 □ H20B	1.80(63.5)
	S9 □ H25B ~S9 □ H60B	1.90(67.0)
	S9 □ H75B ~S9 □ H200B	1.95(68.8)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표3(Table3))

MODEL	출력축 규격(TYPES OF OUTPUT SHAFT)
STRAIGHT TYPE	
S9SH3B ~S9SH200B	
D-CUT TYPE	
S9DH3B ~S9DH200B	
KEY TYPE	
S9KH3B ~S9KH200B	

▼ KEY SPEC

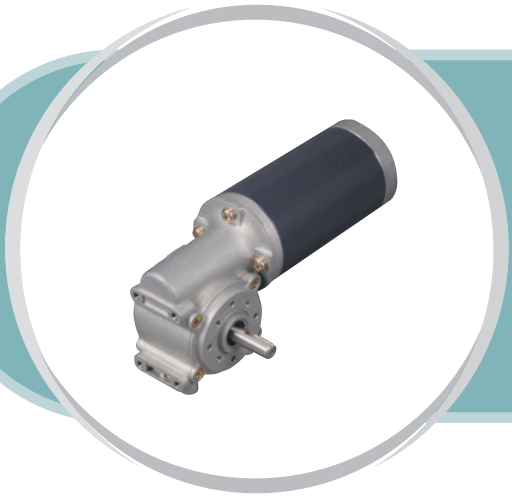
GEAR HEAD	MOTOR
	

GEAR HEAD RATED LOAD

S9D300-90HH

MODEL	GEAR RATIO	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
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KH□B	N-m	2.57	3.08	4.28	5.14	6.42	7.71	8.57	9.64	11.56	13.88	15.42	17.34	20.81	24.98	27.75	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	oz-in	363.8	436.6	606.4	727.7	909.6	1091.5	1212.8	1364.4	1637.3	1964.8	2183.1	2456.0	2947.1	3536.6	3929.5	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0	4163.0
	kgf · cm	26.2	31.5	43.7	52.4	65.5	78.7	87.4	98.3	118.0	141.6	157.3	177.0	212.4	254.9	283.2	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0

■ GEAR HEAD 품명중 ■은 감속비를 표시합니다.(The code in ■ of gearhead model is for gear ratio)
■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다. 감속비 1/10의 중간 GEAR HEAD를 접속한 경우의 허용 TORQUE는 30kg-cm입니다.(It is the permissible torque of the assembled motor and gearhead The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30kgf · cm.)
■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.(■ 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 무부하 회전수를 기준으로 하여 감속비로 나누어서 계산하였습니다. 실제 회전수는 부하의 크기에 따라서 표시된 수치보다 2~20% 적습니다. (No Load rpm equals Motor no load rpm divided by gear ratio. The actual rotation speed is less 2-20% than the displayed value according to the load)
■ 'L' Type 전용으로 기종명에 표시하지 않습니다.(There is no marked the 'L' code for it is an exclusive use.)

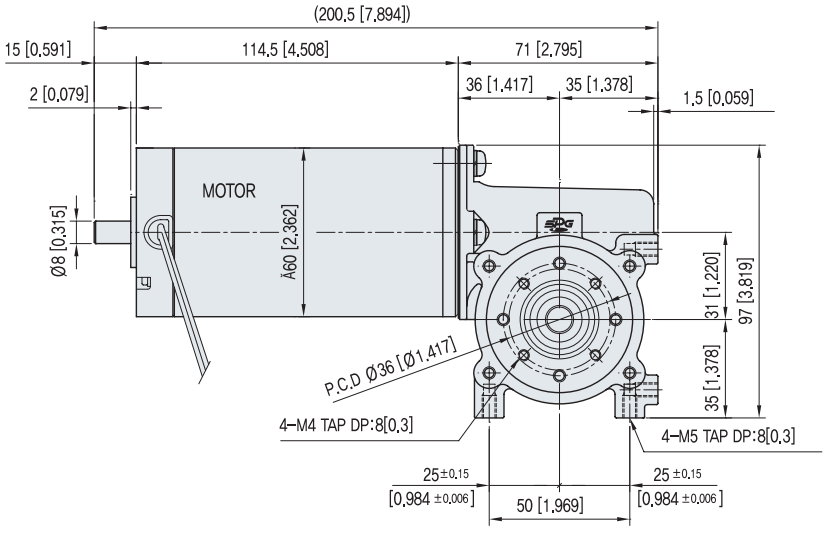


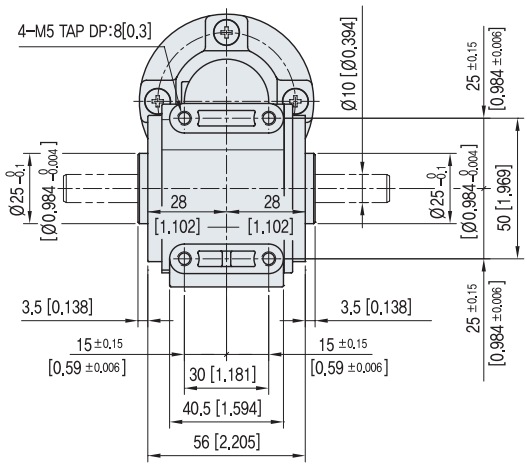
WORM GEARED TYPE

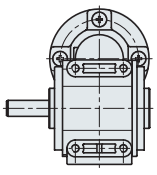
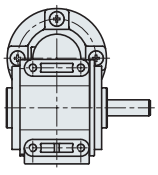
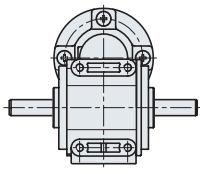
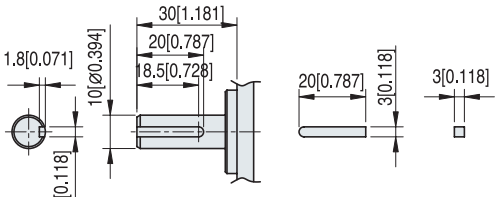
RA6 SERIES MOTOR

MOTOR DIMENSION

UNIT : mm[inch]





SHAFT TYPE			OUTPUT DIMENSION
STANDARD (Shaft on left)	SPECIAL (Shaft on rignt)	SPECIAL (Shaft on both)	
			

MOTOR SPECIFICATION

Gear Ratio	5	10	15	24	38	50	75
No Load Speed (rpm)	740	370	247	154	97	74	49
Efficiency	0.7	0.65	0.55	0.5	0.4	0.35	0.25
Rated Torque (kgf-cm)	6.3	11.7	14.85	21.6	27.36	31.5	33.75
Permissible Torque (kgf-cm)	40						
Weight of Gearbox (kg)	1						
Axial Load / Thrust Load (kgf)	30 / 35						
Voltage (Vd.c.)	24						

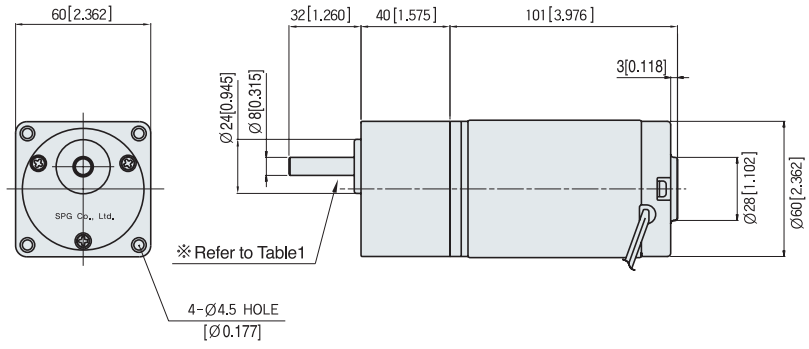
SPECIAL TYPE

MEDICAL DC MOTOR

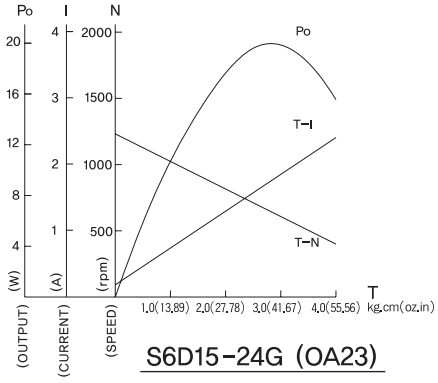


MOTOR DIMENSION

UNIT : mm[inch]

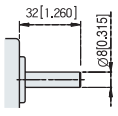
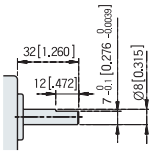
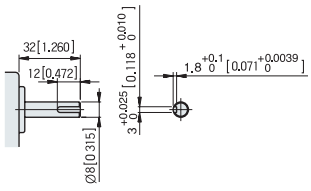


CHARACTERISTIC CURVE



S6D15-24G (OA23)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표1(Table1))

MODEL	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
출력축 구분 (TYPE OF OUTPUT SHAFT)			

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S6D15-24G(OA23)	24	15	1270	MAX.0.25	915	1.6(22.22)	1.2	2000	0.9(31.75)

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

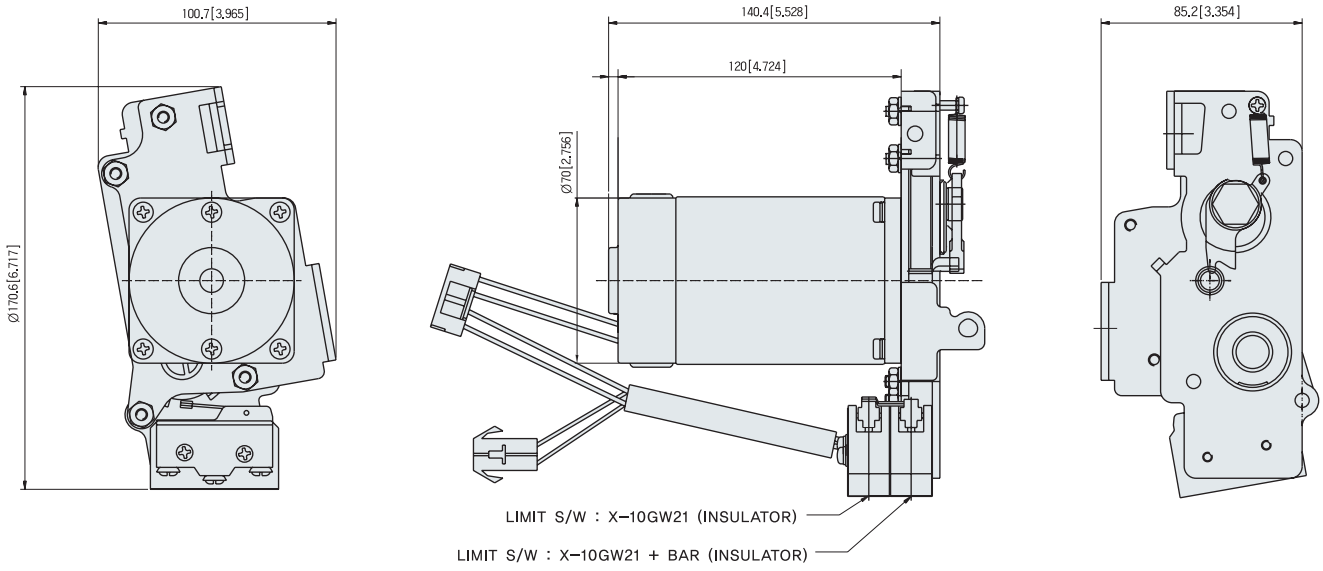


SPECIAL TYPE

HEAVY-ELECTRIC DC MOTOR

MOTOR DIMENSION

UNIT : mm[inch]



MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S7D200-110GH(OB51)	110	220	4000	MAX.0.3	3250	6.0(83.33)	2.4	1000	2.4(84.7)
S7D225-125GH(OB52)	125	225	4500	MAX.0.3	3650	6.0(83.33)	2.4	1000	2.4(84.7)
S7D200-220GH(OB53)	220	200	4000	MAX.0.2	3250	6.0(83.33)	1.2	1000	2.4(84.7)
S7D150-24GH(OB54)	24	150	3800	MAX.1.0	2450	6.0(83.33)	11.0	1000	2.4(84.7)
S7D175-48GH(OB55)	48	175	3850	MAX.0.5	2850	6.0(83.33)	5.5	1000	2.4(84.7)

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

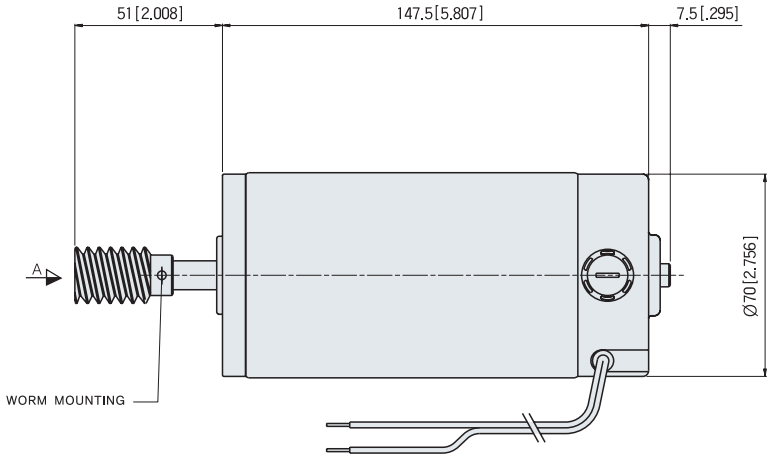
SPECIAL TYPE

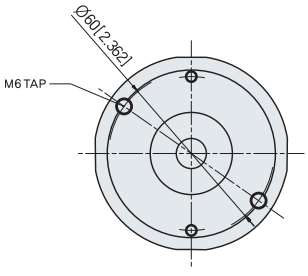
AUTOMATIC DOOR DC MOTOR



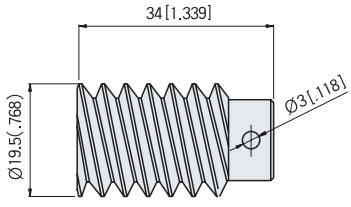
MOTOR DIMENSION

UNIT : mm[inch]





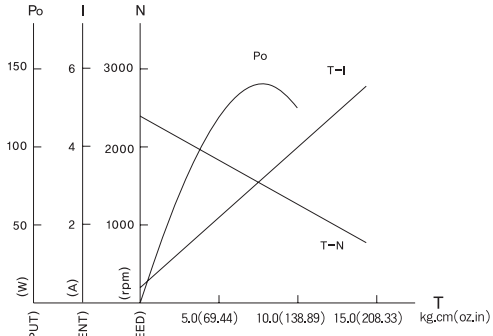
VIEW A



WORM DIMENSION (SCALE 2:1)

※ Refer to Table1

CHARACTERISTIC CURVE



S7D90-90S (OA14)

SPEC for worm gear (표1(Table1))

MODULE	1.25
NO. OF STARTS	3(Right)
P.C.D	17(.669)

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S7D90-90S(OA14)	90	90	2400	MAX.0.2	2000	4.4(61.11)	1.5	2000	1.9(67.0)

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

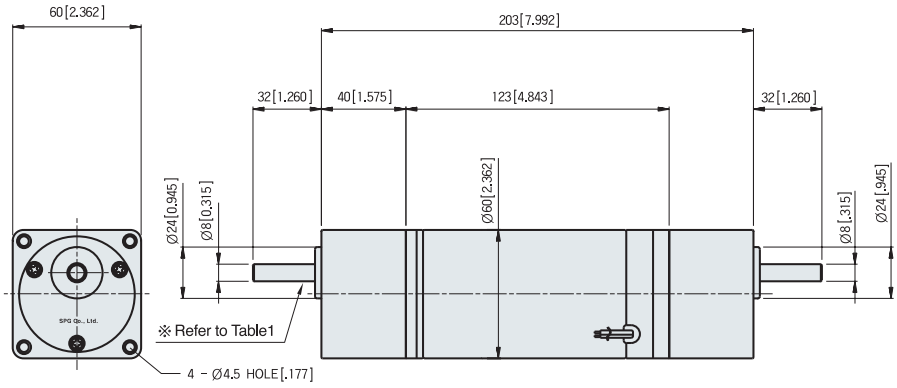


SPECIAL TYPE

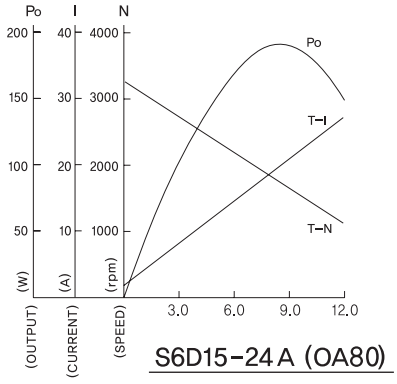
DUAL GEAR-HEAD DC MOTOR

MOTOR DIMENSION

UNIT : mm[inch]

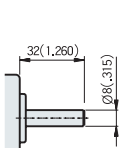
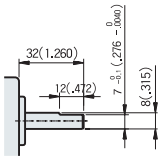
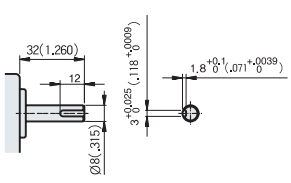


CHARACTERISTIC CURVE



S6D15-24A (OA80)

▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표1(Table1))

MODEL	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S6SA3□ ~S6SA250□	S6DA3□ ~S6DA250□	S6KA3□ ~S6KA250□
출력축 구분 (TYPE OF OUTPUT SHAFT)			

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S6D35-24A(OA80)	24	35	3200	MAX.1.0	2850	1.2(16.66)	2.2	2000	2.2(77.6)

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

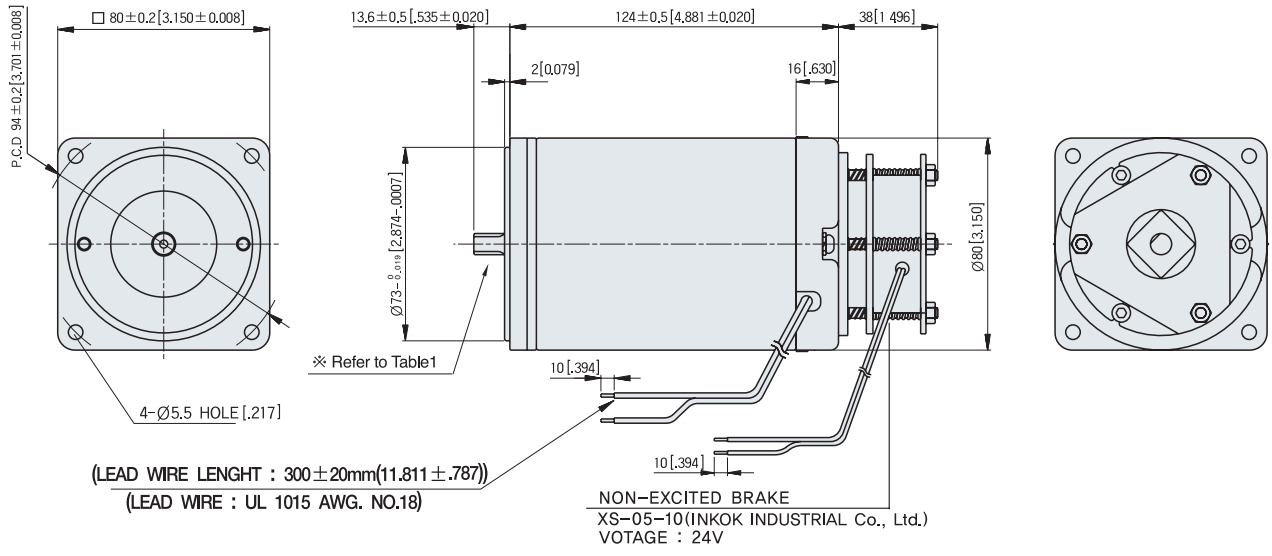
SPECIAL TYPE

ELECTRIC-BRAKE ASSEMBLY DC MOTOR

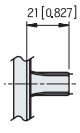
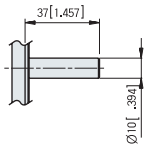
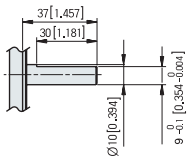
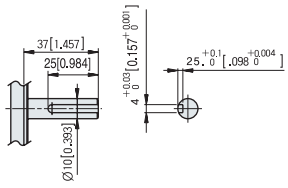


MOTOR DIMENSION

UNIT : mm[inch]



▼ GEAR HEAD 출력축 사양(SPEC for output shaft of gearhead)-(표1(Table1))

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

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Run Duty	Weight (Only motor)
			Revolution	Current	Revolution	Torque	Current		
	V	W	RPM	A	RPM	kg · cm(oz · in)	A	Hr	Kg(oz)
S8D40-24A(OB85)	24	40	3100	MAX.0.8	3000	1.3(18.05)	2.1	2000	2.2(77.6)

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

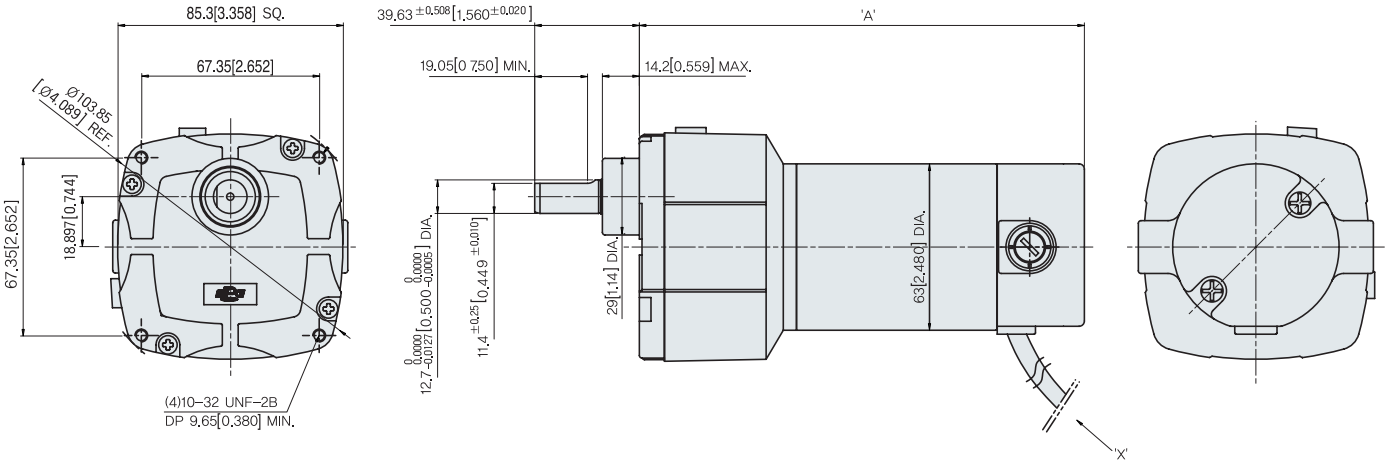


SPECIAL TYPE

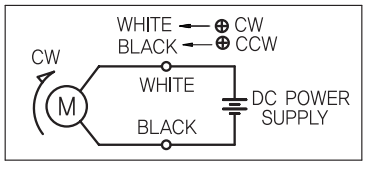
BS2 □ SERIES
DC GEARED MOTOR

MOTOR DIMENSION

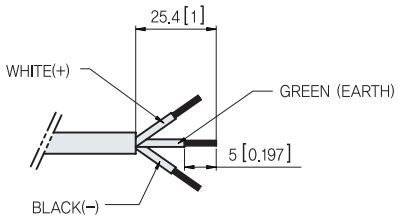
UNIT : mm[inch]



CIRCUIT DIAGRAM



(THE DIRECTION OF MOTOR ROTATION IS AS VIEWED FROM THE OUTPUT SHAFT END OF THE MOTOR)



VIEW "X"

STANDARD FEATURES

- GEAR HOUSING에 VENT HOLE 적용으로 SEALING수명 연장.
- MOTOR입력축 및 출력 SHAFT에 LIP-TYPE SEAL 적용
- 출력측에 NEEDLE BEARING 적용으로 내구 수명 및 축방향 하중능력 증대.
- 기어용 영구적 윤활유 적용으로 기어수명 연장
- MOTOR SHAFT에 정밀 가공된 HELICAL GEAR 적용으로 고강도 및 저소음 실현.
- Vented gearhousing for extended seal life.
- Industrial lip type seals on motors and output shaft.
- Needle bearing on output shaft for increased radial load capacity and long life.
- Permanently lubricated gearing utilizing oil for long life.
- Helical pinion accurately cut on motor shaft for maximum strength and minimum noise.

MOTOR SPECIFICATION

Type	Voltage	Output	No Load		Rated Load			Dimension	Run Duty	Weight
			Speed	Current	Speed	Torque	Current	A		
	V	W	RPM	A	RPM	kg-cm(lb-in)	A	mm/inch	Hr	kg(lb)
BS23DA□	24	26	2800	0.3 max	2450	1.03(0.89)	1.8	152.5/6.00	2000	1.9(4.19)
BS23DB□	130	26	2800	0.3 max	2500	1.01(0.88)	0.4	152.5/6.00	2000	1.9(4.19)
BS24DA□	24	44	2800	0.3 max	2400	1.80(1.56)	2.6	168.5/6.63	2000	2.1(4.63)
BS24DB□	130	44	2800	0.3 max	2450	1.75(1.52)	0.5	168.5/6.63	2000	2.1(4.63)

※ Run Duty는 정격전압인가 무부하 기준입니다.(Run duty is valued at rated Voltage and No load)

Geared motor rated torque

TYPE	GEAR RATIO	6	12	18	30	60	90	180	300	450
BS23DA□	rpm	408.3	204.2	136.1	81.7	40.8	27.2	13.6	8.2	5.4
	kg-cm	5.30	10.60	15.90	26.49	46.09	46.09	46.09	46.09	46.09
	N-m(lb-in)	0.52(4.60)	1.04(9.20)	1.56(13.80)	2.60(23.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)
BS23DB□	rpm	416.7	208.3	138.9	83.3	41.7	27.8	13.9	8.3	5.6
	kg-cm	5.20	10.39	15.59	25.98	46.09	46.09	46.09	46.09	46.09
	N-m(lb-in)	0.51(4.51)	1.02(9.02)	1.53(13.53)	2.55(22.55)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)
BS24DA□	rpm	400.0	200.0	133.3	80.0	40.0	26.7	13.3	8.0	5.3
	kg-cm	9.26	18.52	27.78	46.09	46.09	46.09	46.09	46.09	46.09
	N-m(lb-in)	0.91(8.04)	1.81(16.08)	2.72(24.11)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)
BS24DB□	rpm	408.3	204.2	136.1	81.7	40.8	27.2	13.6	8.2	5.4
	kg-cm	9.00	18.00	27.01	45.01	46.09	46.09	46.09	46.09	46.09
	N-m(lb-in)	0.88(7.81)	1.76(15.63)	2.65(23.44)	4.41(39.07)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)	4.52(40.00)

■ GEAR HEAD와 조합한 경우의 허용 TORQUE입니다.

■ 첫번째 표시된 □는 SPINDLE 형상을 나타내고, 두번째 표시된 □는 감속비를 나타냅니다.

■ 회전방향은 ■색이 MOTOR의 회전방향과 동일방향이고, 기타는 MOTOR 회전방향과 반대방향 입니다.

■ The peak torque of the gear head is 46.09 kg-cm(40.00 lb-in)

■ The □ mark indicates the ratio.

■ ■ color indicates that the output shaft of the geared motor rotates in the opposite direction as the output shaft of the motor. Others indicates the rotation in the same direction.

사용시 주의사항

사용하시기 전에, 취급설명서를 잘 읽은후 올바르게 사용하여 주십시오.
사용시 주의 사항에서는, 안전주의사항의 순서를 경고, 주의로 구분하고 있습니다.



주 의

- 모타, 제어장치의 사양을 넘어서 사용하지 마십시오. 감전, 부상, 장치파손의 위험이 있습니다.
- 모타, 제어장치의 개구부에 손가락과 물건을 넣지 마십시오.
  감전, 부상, 화재의 위험이 있습니다.
- 젖은 손으로 조작하지 마십시오. 감전의 위험이 있습니다.
- 운반시는 모타의 출력축, 가동부, 리드선을 잡지 마십시오. 낙하에 의한 부상의 위험이 있습니다.
- 현품이 주문대로인가를 확인하여 주십시오.
  다른제품을 설치한 경우, 부상, 화재의 위험이 있습니다.
- 모타는 확실하게 고정시킨후에 사용하여 주십시오. 부상, 장치파손의 위험이 있습니다.
- 회전부분에 닿지 않도록 커버등을 설치하여 주십시오. 부상의 위험이 있습니다.
- 기계와의 결합전에 회전방향을 확인하여 주십시오. 부상, 장치파손의 위험이 있습니다.
- 모타, 제어장치에는 올라타거나, 매달리지 않도록 하여 주십시오. 부상의 위험이 있습니다.
- 모타출력축(키홈, 치절부)은 맨손으로는 만지지 마십시오. 부상의 위험이 있습니다.
- 보호장치는, 모타에 부속되어 있지 않습니다. 과부하보호장치를 설치하여 주십시오. 과부하보호장치 이외의
  보호장치(누전차단기등)도 설치하는 것을 권장합니다. 화재의 위험이 있습니다.
- 전원 플라그를 뺄 경우에는, 케이블을 잡고 빼지 마십시오. 감전, 화재의 위험이 있습니다.
- 모타와 제어장치는 지정된 조합으로 사용하여 주십시오. 화재의 위험이 있습니다.
- 기계와 결합하여 운전을 시작하기 전에 그 기계에 맞추어진 PARAMETER의 설정을 행하여 주십시오. 부상의 위험이 있습니다.
- 기계와 결합하여 운전을 시작할 경우에, 언제라도 비상정지할 수 있는 상태로 하여 주십시오. 부상의 위험이 있습니다.
- 이상이 발생한 경우에는 곧바로 전원을 꺼 주십시오. 감전, 부상, 화재의 위험이 있습니다.
- 운전중, 회전체(출력축)에는 접촉하지 마십시오.
  감겨들어가 부상의 위험이 있습니다.
- 운전중, 운전직후는 모타, 제어장치에 손과 몸을 접촉하지 마십시오. 화상의 위험이 있습니다.



경 고

- 폭발성분위기, 인화성가스의 분위기, 부식성의 분위기, 물이 닿을 가능성이 있는 장소, 가연물의 근처에서는
  사용을 피하여 주십시오. 감전, 부상, 화재의 위험이 있습니다.
- 전류가 흐르는 상태에서 이동, 접속, 점검의 작업을 하지 마십시오. 전원을 끄고 작업하여 주십시오.
- 접속은 결선도에 기초를 두고 확실하게 행하여 주십시오. 감전, 화재의 위험이 있습니다.
- 전원 케이블과 리드선을 무리하게 휘거나, 잡아당기거나, 끼우지 마십시오. 감전, 화재의 위험이 있습니다.
- 모타, 제어장치를 기기에 붙이는 경우에는, 손이 닿지 않도록 하거나, 접지하여 주십시오. 감전의 위험이 있습니다.
- 전류가 흐르는 부분이 노출된 상태에서의 운전은 하지 마십시오. 감전의 위험이 있습니다.
- 정전시와 과열보호장치가 작동한 때는, 전원을 꺼 주십시오. 갑자기 재시동할 때, 부상, 장치파손의 위험이 있습니다.
- 브레이크기구가 접속된 모타의 브레이크기구는 확실하게 부하를 고정한 것은 아닙니다. 안전브레이크로
  사용하실 경우는, 따로 안전대책을 세워 주십시오. 부상, 장치파손의 위험이 있습니다.
- 전원을 끈 후 30초간은, 제어장치의 출력단자에 닿지 마십시오. 잔류전압에 의한 감전의 위험이 있습니다.

CAUTION FOR USING

Before using, make sure to use it after reading the Instruction Manual closely. For the suggestions on using, they are classified as caution and warning



CAUTION

- Use only according to the specifiation of speed controller. If not, there will be dangerous fire, electric shock, iniury and damage of the unit.
- Do not put the fingers or things into the outlet of the unit. There may be the electric shock, injury or danger of fire.
- Do not operate with the wet hands. The electric shock may occur.
- In case of moving, do not catch the output shaft, connecting part or the lead wire. There may be the injury by the drop.
- Make sure to check whether the things are what you ordered. If you install the other thing, there may occur the injury and the fire.
- The motor should be used after it is fixed tightly. If not, there may occur the injury and the damage of the unit.
- Make sure to install the cover not to touch the rotatory part. If not, there will be injury.
- Make sure to check the rotatory direction before connecting the machine. If not, there may occur the injury and the damage of the unit.
- Do not touch the side of the motor output shaft (key way, cutting part) with the naked hands. If not, there may occur the injury.
- Make sure to install the overload device, for the protection device is not attached to the motor.
  It is desirable to install the promotion device leakage shorter electricity execpt the overload protection device.
  If not, the fire may occur.
- In case of putting out power plug, do not draw with grasping the plug for the electric shock and fire may occur.
- The motor and the controlling unit should be used only by the designated compounding. If not, the fire may occur.
- Before connecting with the machine and beginning to operate, make sure to install the parameter for the machine. If not, the damage may take place.
- In case of connecting with the machine and beginning to operate, do in the state of emergency stop anytime.
  If not, the damage will occur.
- If there are abnormal cases, turn off the power at once. If not, there will be the electric shock, injury and the damage.
- In operating, do not touch the rotor(output shaft). If not, the damage will take place because of winding.
- In operating and right after the operation, do not touch the controlling device by your hands or body. The fire will occur.



WARNING

- Never put around the explosive atmosphere, gas to be burnt, corrosive air, the location to be wet and combustibles.
  If not, there may occur the electric shock and the fire.
- In case of movement, connection and checking of motor, please turn off the electric power.
- Make sure to connect motor and speed controller based on the specification. If not, there may occur the electric shock and the fire.
- The power cable and the lead line should not be bent, pulled and inserted by force. If not, the electric shock and the fire may occur.
- In case the motor and controlling unit are attached to the machine, never touch by hand or connect with the earth.
  If not, the electric shock may take place.
- Never operate in the state of exposing the flowing current. If not, the electric shock may take place.
- In case of interruption of electric power and working the protection of overheat, please turn off the power.
  When motors are working continuously, there may be injury and damage of the unit.
- For the 30 seconds after the power off, do not touch the output terminal of the controlling unit.
  If not, the electric shock may occur because of the residual volts.

MEMO

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