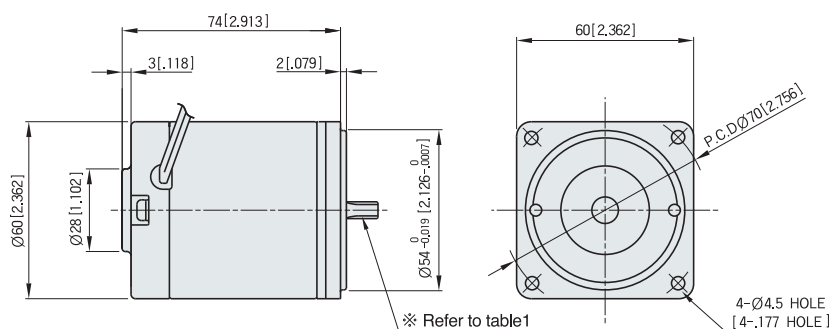




STANDARD TYPE S6D SERIES [6~10W]

MOTOR DIMENSION

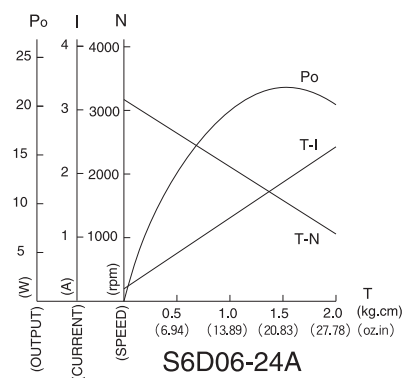
UNIT : mm[inch]



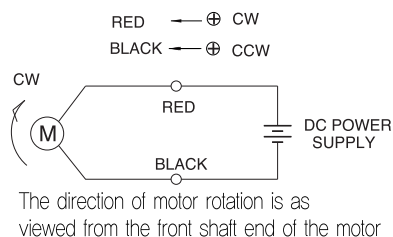
SPEC for output shaft of motor-(Table1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE
	S6D06- A S6D10- A	S6D06- S S6D10- S	S6D06- D S6D10- D

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				Run Duty	Weight
	V		Speed	Current(MAX.)	Speed	Torque		Current		
		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 duty is valued at rated Voltage and No load

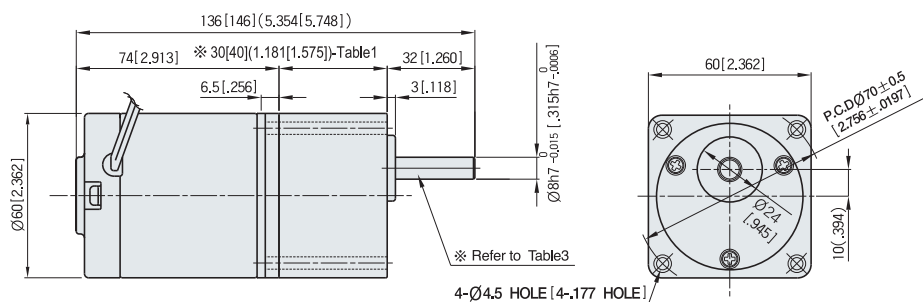
21C, for World geared motor!



GEARED MOTOR SPECIFICATION

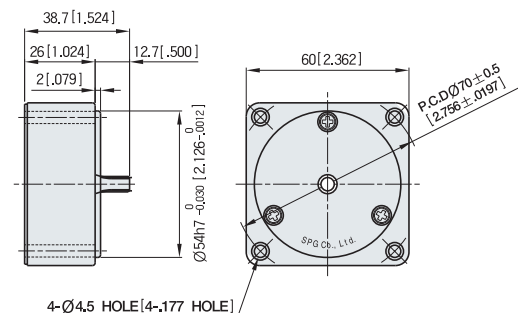
UNIT : mm[inch]

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



INTER-DECIMAL GEAR HEAD

※ MODEL : S6GX10B



3040 – (Table1)

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

WEIGHT – (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)
GEAR HEAD	S6 A50 ~ S6 A250
	0.33(11.6)

SPEC for output shaft of gearhead-(Table3)

MODEL	
STRAIGHT TYPE	
S6SA3 ~ S6SA250	32[1.256] Ø8[.315]
D-CUT TYPE	
S6DA3 ~ S6DA250	32[1.256] 12[.472] 7-0 [.275-.308] Ø8[.315]
KEY TYPE	
S6KA3 ~ S6KA250	32[1.256] 12[.472] Ø8[.315] 1.8 ^{+0.1} ₀ [.071 ^{+0.0039} ₀]

KEY SPEC

GEAR HEAD
12±0.2[.472±.0079] 3-0 ^{+0.025} ₀ [.118-.0010]
3-0 ^{+0.025} ₀ [.118-.0010]

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
S6DA B	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
	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
S6DA B	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
	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

■ The code in ■ of gearhead model is for gear ratio

■ 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 30 f .

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

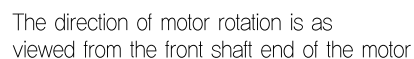
Others indicate rotation in the opposite direction.

■ 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

■ There is no marked the L code for it is an exclusive use.



CIRCUIT DIAGRAM



※ Run duty is valued at rated Voltage and No load

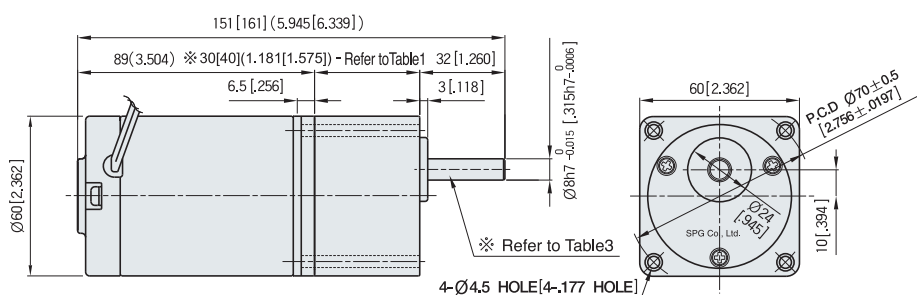
21C, for World geared motor!



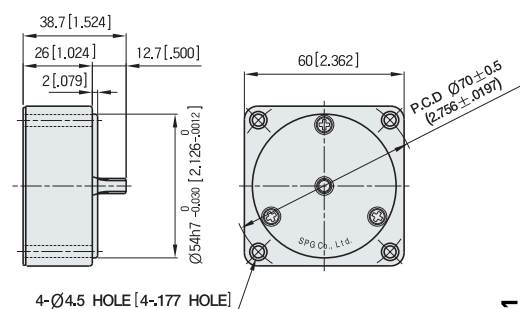
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

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



INTER-DECIMAL GEAR HEAD
※ MODEL : S6GX10B



30(40) – (Table1)

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

WEIGHT – (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)
GEAR HEAD	S6 A50 ~ S6 A250
	0.33(11.6)

SPEC for output shaft of gearhead-(Table3)

MODEL	
STRAIGHT TYPE	
S6SA3 ~ S6SA250	
D-CUT TYPE	
S6DA3 ~ S6DA250	
KEY TYPE	
S6KA3 ~ S6KA250	

KEY SPEC

GEAR HEAD

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
S6DA B	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
	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

■ The code in ■ of gearhead model is for gear ratio

■ 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 30 f .

■ ■ 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.

■ 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

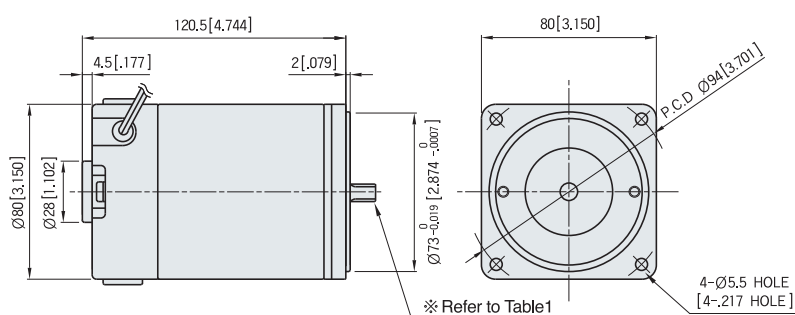
■ There is no marked the L code for it is an exclusive use.



STANDARD TYPE S8D SERIES [25~40W]

MOTOR DIMENSION

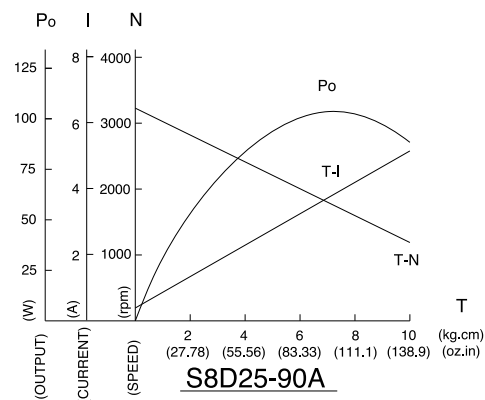
UNIT : mm[inch]



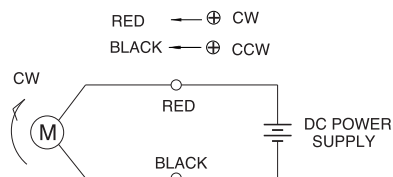
SPEC for output shaft of motor-(Table 1)

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

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



The direction of motor rotation is as viewed from the front shaft end of the motor

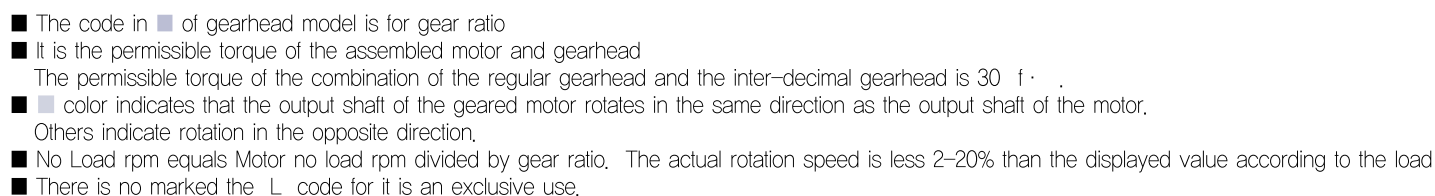
MOTOR SPECIFICATION

(Voltage : DC 24V)

Type	Voltage	Output	No Load		At Rated Lod				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			

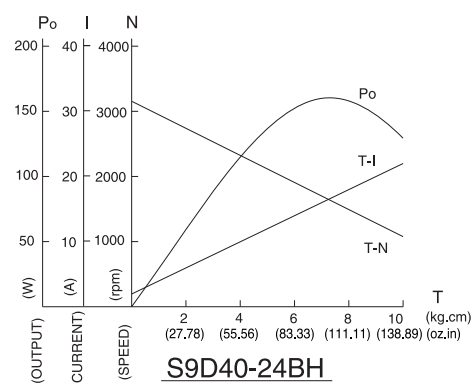
※ Run duty is valued at rated Voltage and No load

INTER-DECIMAL GEAR HEAD
※ MODEL : S8GX10B

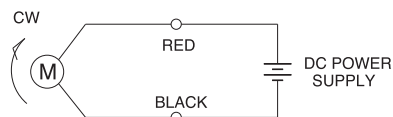




CHARACTERISTIC CURVE



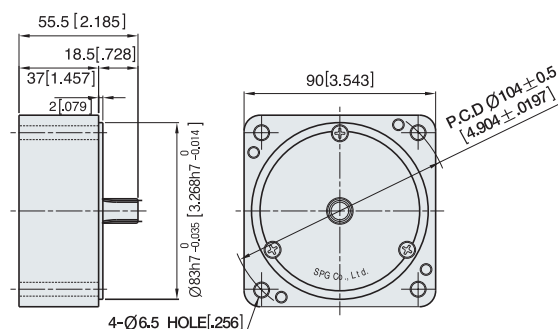
RED $\leftarrow \oplus$ CW
BLACK $\leftarrow \oplus$ CCW



The direction of motor rotation is as viewed from the front shaft end of the motor

※ Run duty is valued at rated Voltage and No load

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



KEY SPEC

GEAR HEAD	MOTOR
25 ± 0.2 $[.984 \pm .008]$ 4 ± 0.03 $[.157.0012]$	25 ± 0.2 $[.984 \pm .008]$ 4 ± 0.03 $[.157.0012]$

KEY SPEC

GEAR HEAD	MOTOR
25 ± 0.2 $[.984 \pm .008]$ 4 ± 0.03 $[.157.0012]$	25 ± 0.2 $[.984 \pm .008]$ 4 ± 0.03 $[.157.0012]$

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

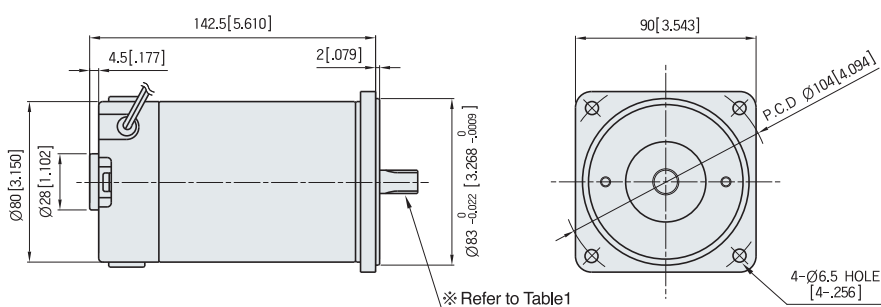
- The code in of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is $30 \cdot T_f \cdot \dots$
- color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- 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
- There is no marked the code for it is an exclusive use.



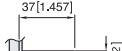
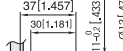
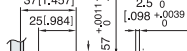
STANDARD TYPE S9D SERIES [60~120W]

MOTOR DIMENSION

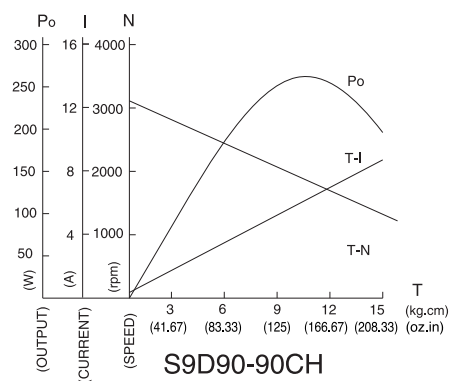
UNIT : mm[inch]



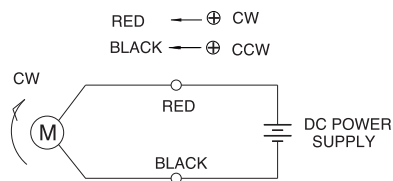
SPEC for output shaft of motor-(Table 1)

	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
MODEL	S9D60- CH S9D90- CH S9D120- CH	S9D60- S S9D90- S S9D120- S	S9D60- D S9D90- D S9D120- D	S9D60- K S9D90- K S9D120- K
				

CHARACTERISTIC CURVE



CIRCUIT DIAGRAM



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 Lod			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	7.9	2000	2.2
						30.5	oz-in			
						2.20	kgf cm			
S9D60-24□	24	60	3000	1.2	2800	0.206	N-m	3.6	2000	2.2
						29.1	oz-in			
						2.10	kgf cm			
S9D60-90□	90	60	3100	0.3	2900	0.196	N-m	1.0	2000	2.2
						27.8	oz-in			
						2.00	kgf cm			
S9D90-12□	12	90	3100	3.0	2750	0.314	N-m	10.5	2000	2.2
						44.4	oz-in			
						3.20	kgf cm			
S9D90-24□	24	90	3250	2.4	2920	0.304	N-m	5.6	2000	2.2
						43.0	oz-in			
						3.10	kgf cm			
S9D90-90□	90	90	3100	0.3	2800	0.314	N-m	1.4	2000	2.2
						44.4	oz-in			
						3.20	kgf cm			
S9D120-12□	12	120	3300	3.5	2800	0.412	N-m	14.9	2000	2.2
						58.3	oz-in			
						4.20	kgf cm			
S9D120-24□	24	120	3300	2.0	2920	0.392	N-m	7.1	2000	2.2
						55.5	oz-in			
						4.00	kgf cm			
S9D120-90□	90	120	3000	0.3	2600	0.441	N-m	2.0	2000	2.2
						62.4	oz-in			
						4.50	kgf cm			

* Run duty is valued at rated Voltage and No load

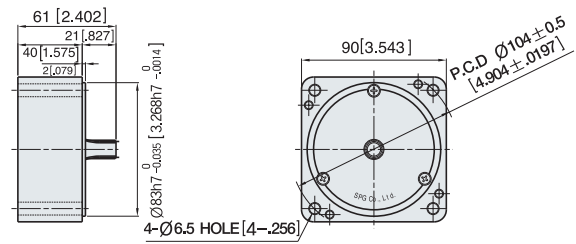
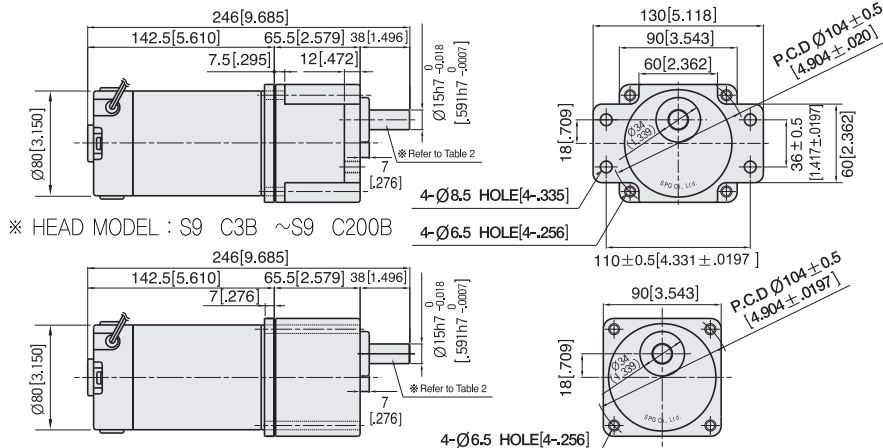
GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

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

INTER-DECIMAL GEAR HEAD

※ MODEL : S9GX10B(H,L)-S



30(40) – (Table1)

SPEC for output shaft of gearhead-(Table 2)

KEY SPEC

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)

MODEL	
STRAIGHT TYPE	
S9SB3 ~S9SB200	
D-CUT TYPE	
S9DB3 ~S9DB200	
KEY TYPE	
S9KB3 ~S9KB200	

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

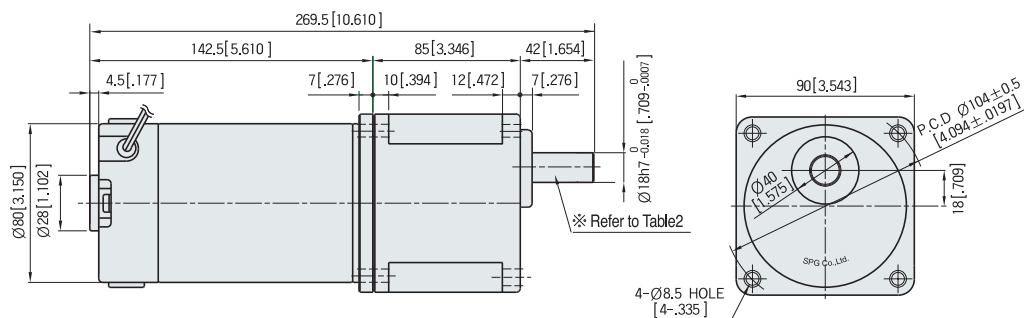
MODEL	GEAR RATIO	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
	No Load rpm	1000	833	600	500	400	333	300	240	200	167	150	120	100	83	75	60	50	40	33	30	25	20	17	15
S9KC□ BH / S9KC□ BH~S	N-m	1.07	1.29	1.79	2.14	2.68	3.21	3.57	4.02	4.82	5.79	6.43	7.23	8.68	10.42	11.57	14.47	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

- The code in ■ of gearhead model is for gear ratio
- 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 30 f · .
- ■ 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.
- 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
- 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) – (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)

SPEC for output shaft of gearhead-(Table2)

MODEL	
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

■ The code in ■ of gearhead model is for gear ratio

■ 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 30 f · .

■ ■ 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.

■ 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

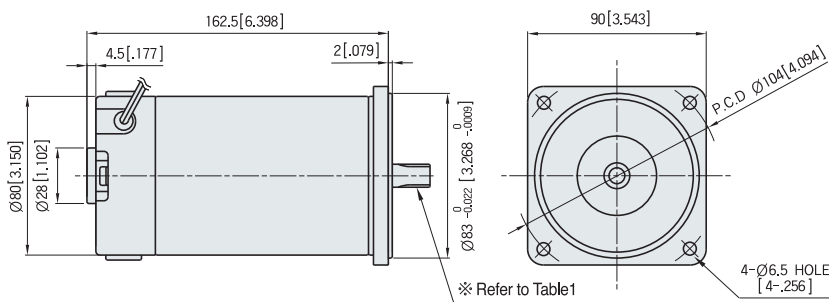
■ There is no marked the L code for it is an exclusive use.

STANDARD TYPE S9D SERIES [150W]

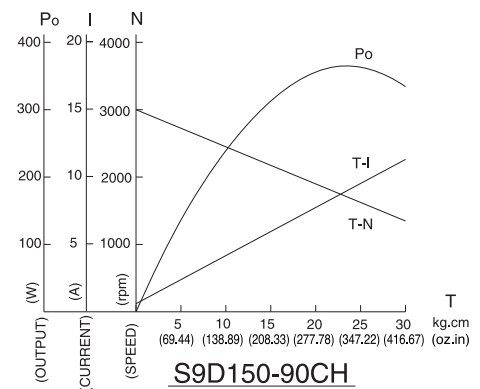


MOTOR DIMENSION

UNIT : mm[inch]



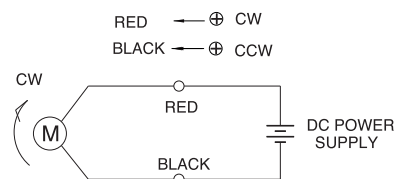
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D150- CH	S9D150- S	S9D150- D	S9D150- K

CIRCUIT DIAGRAM



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 Lod			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	2.0	2000	2.8
						79.1	oz-in			
						5.70	kgf cm			
S9D150-24□	24	150	3000	2.0	2650	0.539	N-m	1.0	2000	2.8
						76.3	oz-in			
						5.50	kgf cm			
S9D150-90□	90	150	3000	0.5	2650	0.539	N-m	0.3	2000	2.8
						76.3	oz-in			
						5.50	kgf cm			

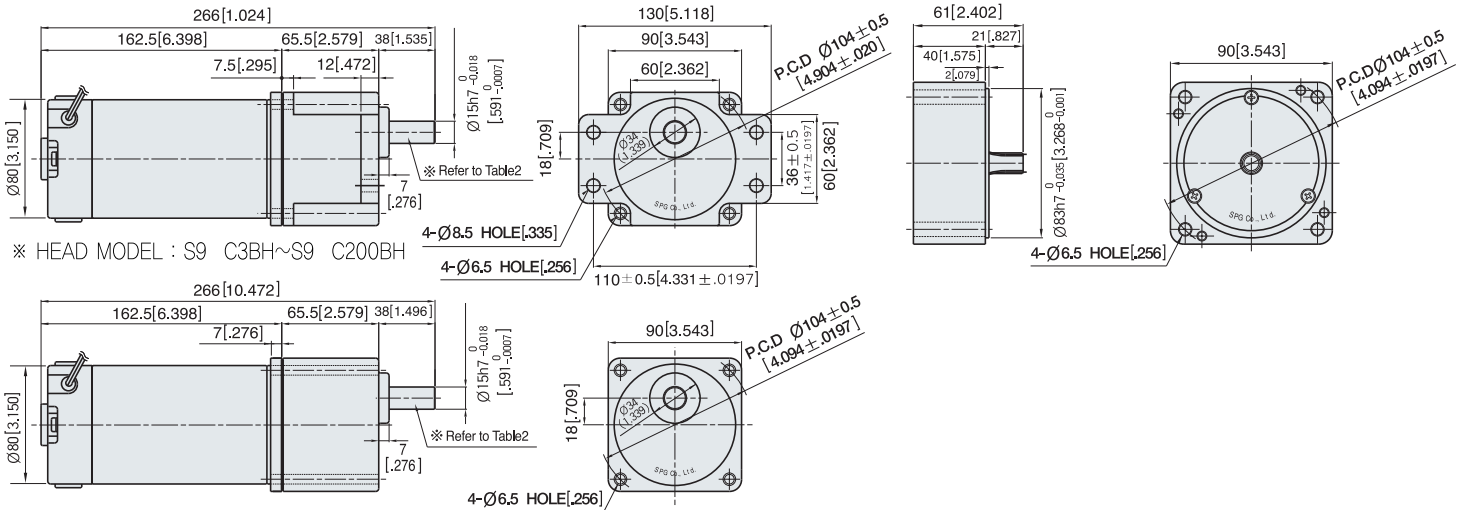
※ Run duty is valued at rated Voltage and No load

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) - (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)

SPEC for output shaft of gearhead-(Table2)

MODEL	
STRAIGHT TYPE	
S9SC3BH ~S9SC200BH	
D-CUT TYPE	
S9DC3BH ~S9DC200BH	
KEY TYPE	
S9KC3BH ~S9KC200BH	

KEY SPEC

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

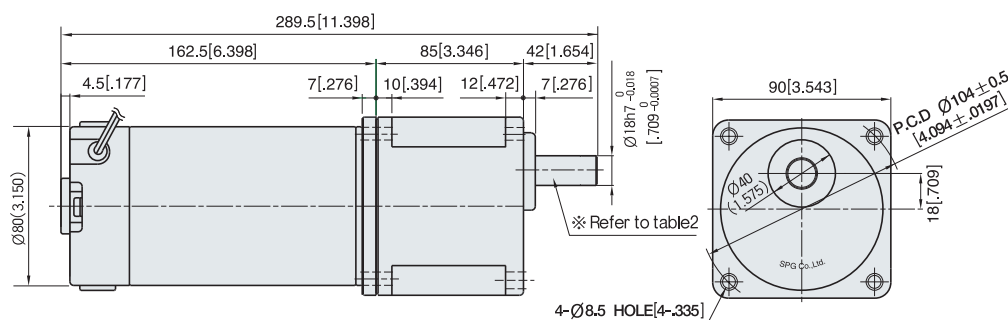
S9D150-90CH

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

- The code in ■ of gearhead model is for gear ratio
- 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 30 f · .
- ■ 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.
- 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
- There is no marked the L code for it is an exclusive use.

GEARED MOTOR SPECIFICATION

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



30(40) – (Table1)

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

SPEC for output shaft of gearhead-(Table2)

MODEL	
STRAIGHT TYPE	
S9SD3B ~S9SD200B	
D-CUT TYPE	
S9DD3B ~S9DD200B	
KEY TYPE	
S9KD3B ~S9KD200B	

KEY SPEC

GEAR HEAD	MOTOR

GEAR HEAD RATED LOAD

S9D150-90HH

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
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

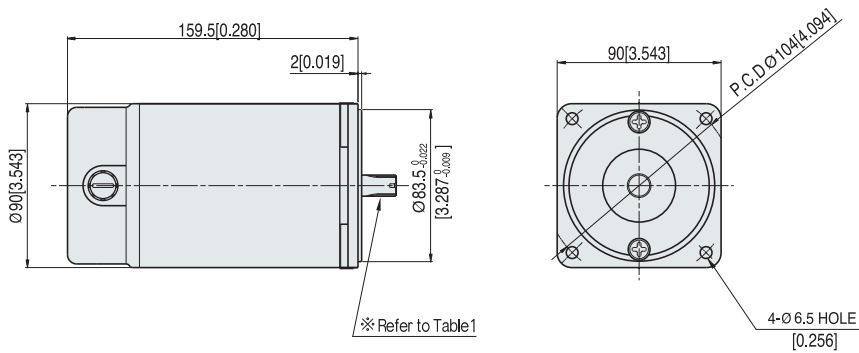
- The code in of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is $30 \cdot f \cdot \dots$
- color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- 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
- There is no marked the code for it is an exclusive use.



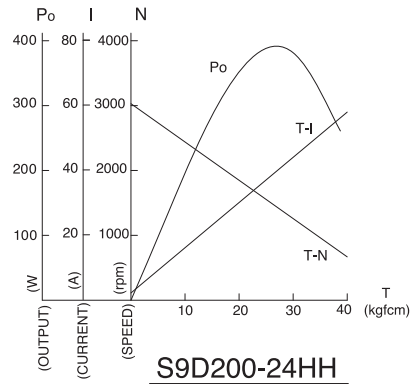
STANDARD TYPE S9D SERIES [200W]

MOTOR DIMENSION

UNIT : mm[inch]



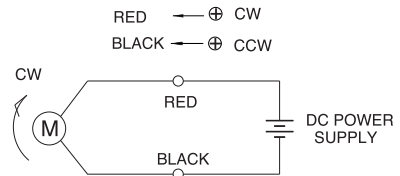
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table 1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D300- HH	S9D300- S	S9D300- D	S9D300- K

CIRCUIT DIAGRAM



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 Lod			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 duty is valued at rated Voltage and No load

Technical drawing of the 100mm diameter shaft assembly. The side view shows a shaft with a total length of 321.5 [12.657] mm. Key dimensions include a 194.5 [7.657] mm section, a 7 [0.276] mm section, a 10 [0.394] mm section, a 12 [0.472] mm section, an 85 [3.346] mm section, and a 42 [1.654] mm section. The shaft has a diameter of Ø90 [3.543] mm. The end view shows a square flange with a width of 90.3 [3.543] mm and a central hole of Ø40 [1.575] mm. The flange has four mounting holes with a diameter of Ø8.5 [0.335] mm. The shaft has a tolerance of Ø1817 -0.018 / 0 and a surface finish of [Ø.708717 -0.007]. A note indicates "Refer to Table2".

KEY SPEC

GEAR HEAD	MOTOR
27.5 ± 0.2 [0.083, 0.079] 5.0 ± 0.03 [0.197, 0.012]	27.5 ± 0.2 [0.084, 0.079] 4.0 ± 0.03 [0.157, 0.012]

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
S9KHO 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

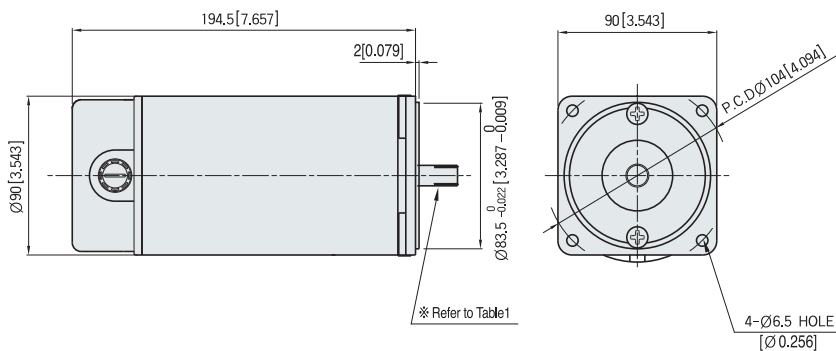
- The code in of gearhead model is for gear ratio
- It is the permissible torque of the assembled motor and gearhead
The permissible torque of the combination of the regular gearhead and the inter-decimal gearhead is 30 f · .
- color indicates that the output shaft of the geared motor rotates in the same direction as the output shaft of the motor.
Others indicate rotation in the opposite direction.
- 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
- There is no marked the code for it is an exclusive use



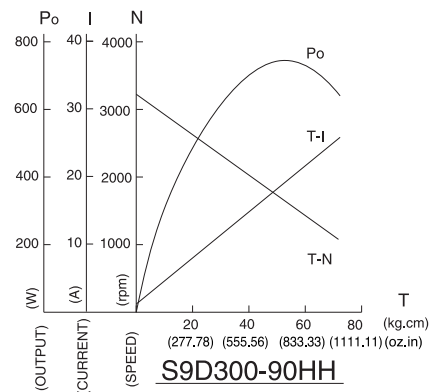
STANDARD TYPE S9D SERIES [300W]

MOTOR DIMENSION

UNIT : mm[inch]



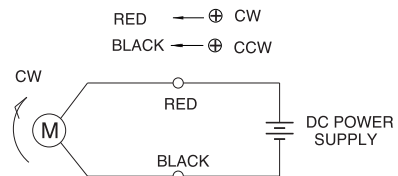
CHARACTERISTIC CURVE



SPEC for output shaft of motor-(Table1)

MODEL	GEARED TYPE	STRAIGHT TYPE	D-CUT TYPE	KEY TYPE
	S9D300- HH	S9D300- S	S9D300- D	S9D300- K

CIRCUIT DIAGRAM



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 Lod				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 duty is valued at rated Voltage and No load

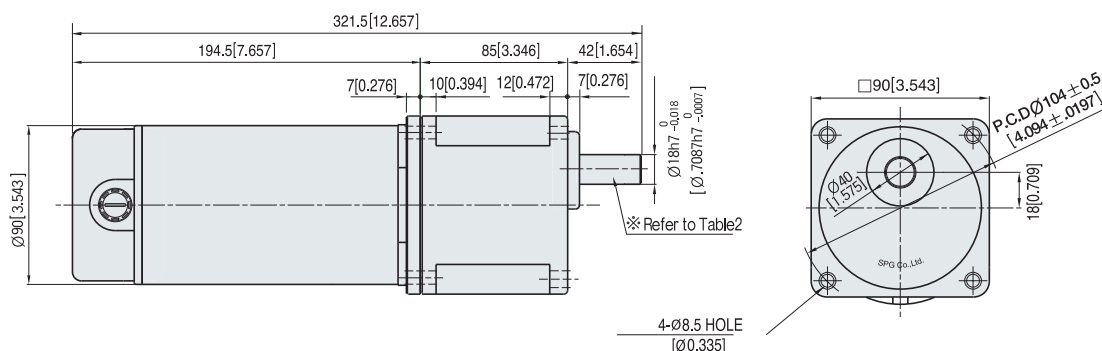
21C, for World geared motor!



GEARED MOTOR SPECIFICATION

UNIT : mm[inch]

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



30(40) – (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)
	S9 H200B		

SPEC for output shaft of gearhead-(Table2)

MODEL	
STRAIGHT TYPE	
S9SH3B ~S9SH200B	39.5 [1.555] 25 [0.984] $\varnothing 18 \text{h7} / \text{k6}$
D-CUT TYPE	
S9DH3B ~S9DH200B	39.5 [1.555] 25 [0.984] 17- $\varnothing 17$ [0.669 - 0.670] $\varnothing 18 \text{h7} / \text{k6}$
KEY TYPE	
S9KH3B ~S9KH200B	39.5 [1.555] 27.5 [1.083] 25 [0.984] $\varnothing 18 \text{h7} / \text{k6}$ 5- $\varnothing 10$ [0.394] 3- $\varnothing 11$ [0.433] 0.118 [0.0046]

KEY SPEC

GEAR HEAD	MOTOR
27.5 $\pm$ 0.2 [1.083 $\pm$ 0.0079] 5- $\varnothing 10$ [0.394] 5- $\varnothing 10$ [0.394]	27.5 $\pm$ 0.2 [1.083 $\pm$ 0.0079] 4- $\varnothing 10$ [0.394] 4- $\varnothing 10$ [0.394]

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
S9KH□B	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
	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

- The code in ■ of gearhead model is for gear ratio
- 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 30 f .
- ■ 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.
- 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
- There is no marked the L code for it is an exclusive use.