

DESCRIPTION OF DC MOTOR

S **5(5)** **D(W)** **60 - 24 - GU** **30S**

① ② ③ ④ ⑤ ⑥ ⑦

①	Company code						
②	(Model and Diameter)						
	Code	2	3	4	5	55	6
	Mounting Flange (mm)	60×60	70×70	80×80	90×90	90×90	104×104
	Case Diameter (mm)	60	60	80	90	90	90
③	Motor Type	D: 直流电机 (D: DC MOTOR) DW: 针对60,70系列电机D后加W表示外置电刷电机 For 60,70 series motor, DW refers to external brush motor					
④	Output Power	60: 60W					
⑤	Voltage	24: 24VDC					
⑥	Shaft of Motor Shaft	GN: 普通型斜齿轴 GN: General Helical Gear A1: 铣键槽 A1: Milling Keyway GU: 加强型斜齿轴 GU: Reinforced Helical Gear A: 铣扁 A1: Flat Type					
⑦	Output Speed	30S: 3000rpm					

Note: We use M to symbolise the brake, such as S5(5)D60-24GU-30S-M.

DESCRIPTION OF GEAR BOX

5 **GN** **50** **K**

① ② ③ ④

①	Model and Dimension	2:60mm 3:70mm 4:80mm 5:90mm 6:104mm
②	Gear Type	GN: 普通型斜齿轴 GN: General Helical Gear GU: 加强型斜齿轴 GU: Reinforced Helical Gear
③	Gear Ratio	50: 减速比1:50 50: Gear ratio 1:50 10X仅限于速比1:10的中间 减速比 10X refers to the mid gear ratio 1:10
④	Bearing Type	K: 滚珠轴承对GU型方箱体标注为KB K: Ball Bearing(Mark KB for Type GU square gearbox)



6W 10W
15W

FLAME SIZE □ 60mm
DC GEAR MOTOR

6W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
	V	W	r/min	A	r/min	mN.m	A	H	kg
S2D06-12 □	12	6	3200	0.6 Max.	2950	19	0.8	2000	0.6
S2DW06-12 □	12	6	3200	0.6 Max.	2950	19	0.8	2000	0.6
S2D06-24 □	24	6	3200	0.3 Max.	2950	19	0.5	2000	0.6
S2DW06-24 □	24	6	3200	0.3 Max.	2950	19	0.5	2000	0.6
S2D06-90 □	90	6	3000	0.2 Max.	2800	20	0.3	2000	0.6
S2DW06-90 □	90	6	3000	0.2 Max.	2800	20	0.3	2000	0.6

10W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
	V	W	r/min	A	r/min	mN.m	A	H	kg
S2D10-12 □	12	10	3200	1.0 Max.	2800	34	2.0	2000	0.7
S2DW10-12 □	12	10	3200	1.0 Max.	2800	34	2.0	2000	0.7
S2D10-24 □	24	10	3300	0.5 Max.	3000	32	0.9	2000	0.7
S2DW10-24 □	24	10	3300	0.5 Max.	3000	32	0.9	2000	0.7
S2D10-90 □	90	10	3200	0.3 Max.	2800	34	0.6	2000	0.7
S2DW10-90 □	90	10	3200	0.3 Max.	2800	34	0.6	2000	0.7

15W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
	V	W	r/min	A	r/min	mN.m	A	H	kg
S2D15-12 □	12	15	3200	0.8 Max.	2950	48	2.0	2000	0.9
S2DW15-12 □	12	15	3200	0.8 Max.	2950	48	2.0	2000	0.9
S2D15-24 □	24	15	3300	0.4 Max.	3000	48	1.0	2000	0.9
S2DW15-24 □	24	15	3300	0.4 Max.	3000	48	1.0	2000	0.9
S2D15-90 □	90	15	3200	0.2 Max.	3000	48	0.4	2000	0.9
S2DW15-90 □	90	15	3200	0.2 Max.	3000	48	0.4	2000	0.9

Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

We use W after D in the model to express the external brush motor, such as Z2DW06-12GN. If no W, it means the standard internal brush motor. For external brush motor, you can replace the brush directly. For internal ones, we need to disassembly the motor first.

Allowance Torque Unit : 上段 Upside (N.m) /下段 Belowside (kgf.cm)

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
S2D06-24GN	Speed (rpm)	983	819	590	492	393	328	295	236	197	164	148	118	98	82	74	59	49	39	33	30	25	20	16	15
	2GN□K	0.05	0.06	0.08	0.09	0.12	0.14	0.16	0.20	0.24	0.28	0.28	0.35	0.42	0.51	0.57	0.71	0.76	0.96	1.15	1.27	1.53	1.91	2.29	2.55
S2D10-24GN	Speed (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
	2GN□K	0.08	0.09	0.13	0.15	0.19	0.23	0.26	0.32	0.39	0.46	0.46	0.58	0.70	0.84	0.93	1.16	1.25	1.75	1.88	2.09	2.51	3.00	3.00	3.00
S2D15-24GN	Speed (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
	2GN□K	0.12	0.14	0.19	0.23	0.29	0.35	0.39	0.48	0.58	0.70	0.70	0.87	1.04	1.25	1.39	1.74	1.88	2.35	2.82	3.00	3.00	3.00	3.00	3.00
		1.14	1.36	1.90	2.27	2.84	3.41	3.79	4.74	5.69	6.82	6.82	8.53	10.23	12.28	13.65	17.1	18.4	23.0	27.6	30.0	30.0	30.0	30.0	30.0

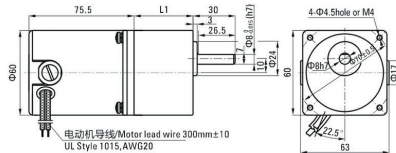
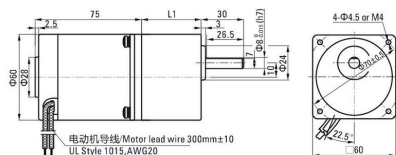
Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

Lead wiring type

6W 重量 Weight : 电动机 Motor : 0.6kg
10W 重量 Weight : 电动机 Motor : 0.7kg

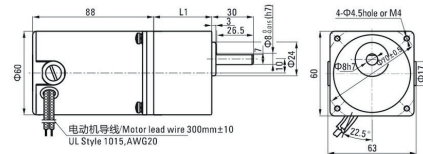
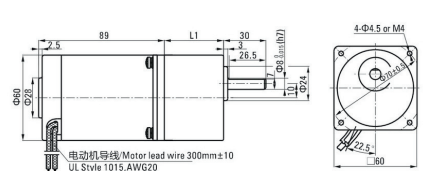
减速器 Gearhead : 0.4kg
减速器 Gearhead : 0.4kg



Lead wiring type

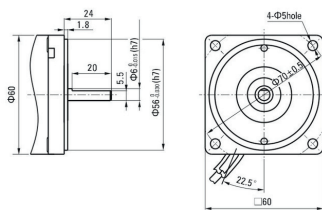
15W 重量 Weight : 电动机 Motor : 0.9kg

减速器 Gearhead : 0.4kg



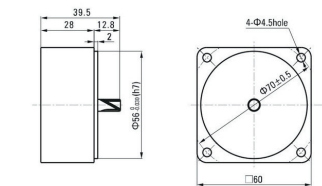
Shaft section of round shaft type

除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



Decimal Gearhead

可安装在GN齿轮轴型上 Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
2GN10X
重量 Weight : 0.24kg



Gearhead Model	Gear Ratio	L1
2GN□K	3~18	32
	25~200	41

Enter the gear ratio in the box (□) within the model name



25W

FLAME SIZE □70mm
DC GEAR MOTOR

25W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
	V	W	r/min	A	r/min	mN.m	A	H	kg
S3D25-12 □	12	25	3300	1.0 Max.	3000	80	3.5	2000	1.0
S3DW25-12 □	12	25	3300	1.0 Max.	3000	80	3.5	2000	1.0
S3D25-24 □	24	25	3200	0.5 Max.	2800	85	1.6	2000	1.0
S3DW25-24 □	24	25	3200	0.5 Max.	2800	85	1.6	2000	1.0
S3D25-90 □	90	25	3100	0.3 Max.	2700	88	0.6	2000	1.0
S3DW25-90 □	90	25	3100	0.3 Max.	2700	88	0.6	2000	1.0

Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

We use W after D in the model to express the external brush motor, such as Z2DW06-12GN. If no W, it means the standard internal brush motor. For external brush motor, you can replace the brush directly. For internal ones, we need to disassemble the motor first.

Gear Motor-Torque Table

- 减速器另售 中间减速器另售。
Gearheads are sold separately. Decimal gearheads are not available.
- 减速品型号的 □ 中为减速比的数值。
Enter the gear ratio in the box (□) within the model name.
- 色表示与电动机同一方向运转, 其他则为相反方向。
The colored background □ indicates the same rotating direction of the motor while the rotating direction of others are opposite.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
The speed is calculated by dividing the motor's synchronous speed by the gear ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时, 可在电动机与减速机之间安装减速比为10的中间减速器。
这时的容许转矩为5N.m。
To reduce the speed beyond the gear ratio in the table, attach a decimal gearhead (gear ratio:10) between the gearhead and motor. In that case, the permissible torque is 5N.m.

Allowance Torque Unit : 上段 Upside (N.m) /下段 Belowside (kgf.cm)

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
S3D25-24 GN	Speed (rpm)	933	778	560	467	373	311	280	224	187	156	140	112	93	78	70	56	47	37	31	28	23	19	16	14
	3GN□K	0.21	0.25	0.35	0.41	0.52	0.62	0.69	0.86	1.04	1.24	1.24	1.55	1.86	2.24	2.49	3.11	3.73	4.66	5.00	5.00	5.00	5.00	5.00	5.00
		2.03	2.44	3.38	4.06	5.08	6.09	6.77	8.46	10.2	12.2	12.2	15.2	18.3	21.9	24.4	30.5	36.6	45.7	50.0	50.0	50.0	50.0	50.0	50.0

Allowance Torque Unit : 上段 Upside (N.m) / 下段 Belowside (kgf.cm)

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
S4D25-24GN	Speed (rpm)	950	792	570	475	380	317	285	228	190	158	143	114	95	79	71	57	48	38	32	29	24	19	16	14
	4GN□K	0.20	0.24	0.34	0.41	0.51	0.61	0.68	0.85	1.02	1.22	1.36	1.53	1.83	2.20	2.44	3.05	3.30	4.12	4.95	5.50	6.60	8.00	8.00	8.00
S4D40-24GN	Speed (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
	4GN□K	0.31	0.37	0.52	0.62	0.77	0.93	1.03	1.29	1.55	1.86	2.06	2.32	2.78	3.34	3.71	4.64	5.01	6.27	7.52	8.00	8.00	8.00	8.00	8.00
		3.03	3.64	5.05	6.06	7.58	9.10	10.1	12.6	15.2	18.2	20.2	22.7	27.3	32.7	36.4	45.5	49.1	61.4	73.7	80.0	80.0	80.0	80.0	80.0

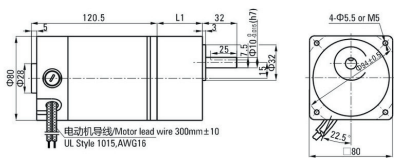
Dimensions (Unit mm)

减速器附有安装用螺丝 Mounting screws are included with gearhead.

Lead wiring type

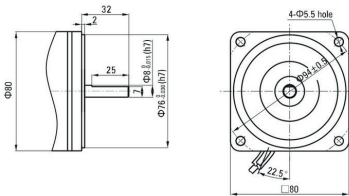
25W 重量 Weight : 电动机 Motor : 1.7kg
40W 重量 Weight : 电动机 Motor : 1.8kg

减速器 Gearhead : 0.80kg
减速器 Gearhead : 0.80kg



Shaft section of round shaft type

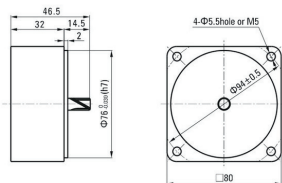
除重量及轴部外电动机外形与齿轮轴型相同。
Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



Decimal Gearhead

可安装在GN齿轴轴型上 Can be connected to GN pinion shaft type
电动机外形与齿轮轴型相同
4GN10X

重量 Weight : 0.41kg



Gearhead Model	Gear Ratio	L1
4GN□K	3~18	32
	25~200	41

Enter the gear ratio in the box (□) within the model name



40W 60W
90W 120W
250W

FLAME SIZE □ 90mm
DC GEAR MOTOR

40W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
S5D40-12 □	12	40	3100	2.0 Max.	2800	136	5.2	2000	1.9
S5D40-24 □	24	40	3000	1.0 Max.	2800	136	2.6	2000	1.9
S5D40-90 □	90	40	3200	0.3 Max.	3000	127	0.7	2000	1.9

60W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
S5D60-12 □	12	60	3000	2.0 Max.	2600	220	9.0	2000	2.2
S5D60-24 □	24	60	3100	1.0 Max.	2800	205	3.8	2000	2.2
S5D60-90 □	90	60	3100	0.3 Max.	2900	198	1.0	2000	2.2

90W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
S5D90-12 □	12	90	3100	2.0 Max.	2600	330	12.0	2000	2.2
S5D90-24 □	24	90	3300	1.0 Max.	2800	307	5.0	2000	2.2
S5D90-90 □	90	90	3000	0.3 Max.	2900	307	1.4	2000	2.2

120W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
S5D120-12 □	12	120	3100	2.0 Max.	2500	458	15.0	2000	2.2
S5D120-24 □	24	120	3200	1.0 Max.	2600	441	7.0	2000	2.2
S5D120-90 □	90	120	3000	0.3 Max.	2600	441	2.0	2000	2.2

250W Motor Performance Parameters

Model	Voltage	Power	No-load Parameters		Load Parameters			Brush Life	Motor Weight
			Speed	Current	Speed	Torque	Current		
S55D250-24 □	24	250	3400	3.0 Max.	3000	796	16.0	2000	3.2
S55D250-90 □	90	250	3300	1.2 Max.	3000	796	4.2	2000	3.2
S55D250-220 □	220	250	3300	0.9 Max.	3000	796	2.2	2000	3.2

Motor voltage, power and speed will be customized according to his requestment under the allowed circumstance of adoptable dimension.

Allowance Torque Unit : 上段 Upside (N.m) / 下段 Belowside (kgf.cm)

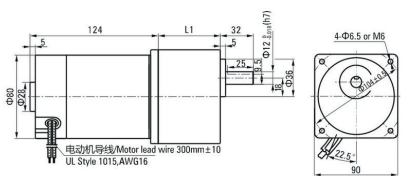
Model	Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
SSD40-24GN	Speed (rpm)	933	778	560	467	373	311	280	224	187	156	140	112	93	78	70	56	47	37	31	28	23	19	16	14
	5GN□K	0.33	0.40	0.55	0.66	0.83	0.99	1.11	1.38	1.66	1.79	1.99	2.49	2.98	3.58	3.58	4.48	5.37	6.71	8.06	8.95	10.0	10.0	10.0	10.0
SSD60-24GU	Speed (rpm)	933	778	560	467	373	311	280	224	187	156	140	112	93	78	70	56	47	37	31	28	23	19	16	14
	5GU□KB	0.50	0.60	0.83	0.99	1.24	1.49	1.49	1.86	2.24	2.69	2.69	3.36	4.03	4.83	5.37	6.71	8.06	10.1	10.9	12.1	14.5	18.1	20.0	20.0
SSD90-24GU	Speed (rpm)	933	778	560	467	373	311	280	224	187	156	140	112	93	78	70	56	47	37	31	28	23	19	16	14
	5GU□KB	0.75	0.90	1.24	1.49	1.86	2.24	2.24	2.80	3.36	4.03	4.03	5.03	6.04	7.25	8.06	10.1	12.4	15.1	16.3	18.1	20.0	20.0	20.0	20.0
SSD120-24GU	Speed (rpm)	867	722	520	433	347	289	260	208	173	144	130	104	87	72	65	52	43	35	29	26	22	17	14	13
	5GU□KB	1.07	1.29	1.79	2.14	2.68	3.21	3.21	4.02	4.82	5.78	5.78	7.23	8.68	10.4	11.6	14.5	17.4	20.0	20.0	20.0	20.0	20.0	20.0	20.0
SSD250-24GU	Speed (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
	5GU□KB	1.93	2.32	3.22	3.87	4.83	5.80	5.80	7.25	8.70	10.4	10.4	13.1	15.7	18.8	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0

Dimensions (Unit mm)

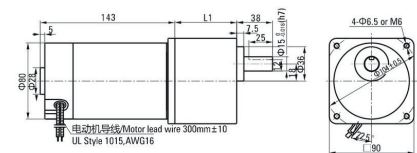
减速器附有安装用螺丝 Mounting screws are included with gearhead.

Lead wiring type

40W 重量 Weight : 电动机 Motor : 1.9kg 减速器 Gearhead : 1.35kg

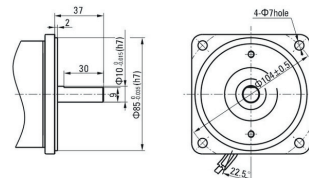
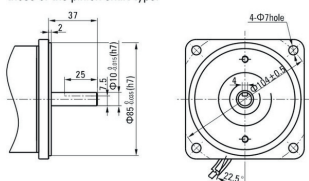


60W/90W/120W 重量 Weight : 电动机 Motor : 2.2kg 减速器 Gearhead : 1.5kg

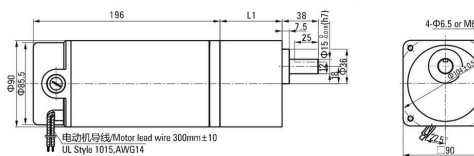


Shaft section of round shaft type

除重量及轴部分电动机外形与齿轮轴型相同。 Excluding weight and the shaft section motor shape are the same as those of the pinion shaft type.



250W 重量 Weight : 电动机 Motor : 3.2kg 减速器 Gearhead : 1.5kg



40W

Gearhead Model	Gear Ratio	L1
5GN□K	3-18	32
	25-200	42.5

60W/90W/120W/250W

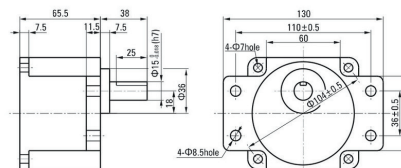
Gearhead Model	Gear Ratio	L1
5GU□KB	3-200	65.5

● 减速器型号的□中为减速比的数值 Enter the gear ratio in the box (□) within the model name

凸缘安装型减速器 Flange Mounting Reducer

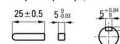
可安装在GU齿轮轴型上 Can be mounted on GU type gear shaft 5GU□K

重量 Weight: 1.5kg 60W/90W/120W/250W



键•键槽 (减速器附件)

Key•Keyway (The Key Is Included With The Gearhead)



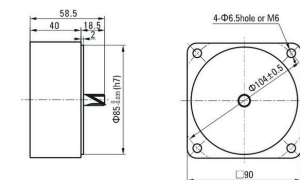
Decimal Gear head

可安装在GN齿轮轴型上 Can be connected to GN pinion shaft type

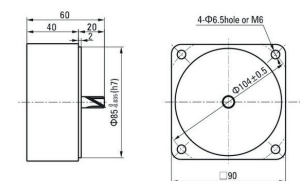
电动机外形与齿轮轴型相同

5GN10X

40W 重量 Weight : 0.41kg

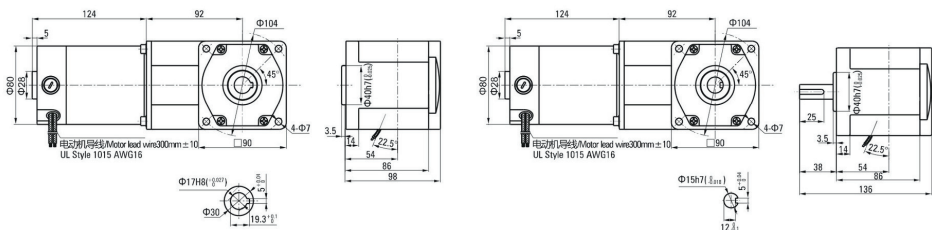


60W/90W/120W/250W 重量 Weight : 0.651kg



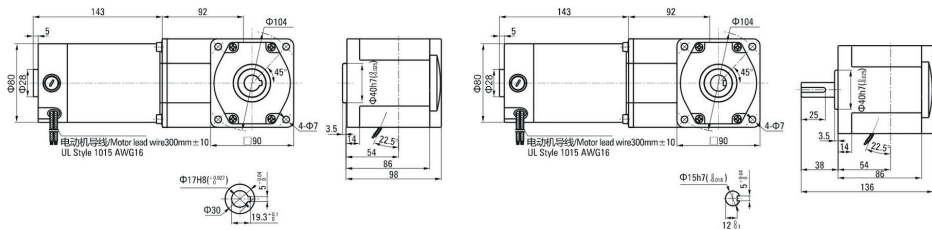
■ Dimensions (Unit mm)

40W



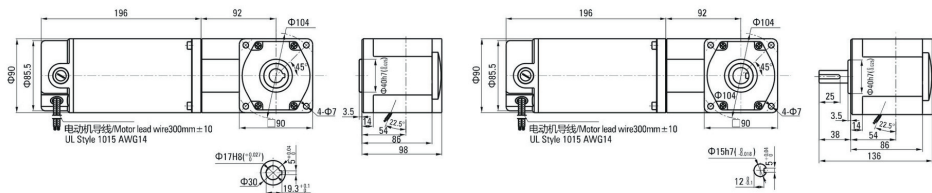
■ Dimensions (Unit mm)

60W/90W/120W



■ Dimensions (Unit mm)

250W



250W

FLAME SIZE □104mm
DC RIGHT ANGLE GEAR MOTOR

■ Gear Motor-Torque Table

- 减速机-中间减速机另售。Gearhead and Intermediate gearhead are sold separately.
- 减速机品名的□中为减速比的数值。Enter the reduction ratio into the blank(□) within the model name.
- □色表示分别从电动机轴轴端和减速机轴轴端看时，电机轴与输出轴转向反方向运转。其他则为同一方向运转。
□ Indicates the opposite rotating direction between motor shaft and gearbox shaft while others are in same direction.
- 转速是以电动机的额定转速为基准除以减速比而算出来的数值。实际转速将随负载大小变化而比所示数值减少2%~20%左右。
The speed is calculated by dividing the motor's synchronous speed by the reduction ratio. The actual speed is 2%~20% less than the displayed value, depending on the size of the load.
- 希望以大于下表的减速比进行进一步减速时，可在电动机与减速机之间安装减速比为10的中间减速机。这时的容许转矩为60N·m。
To reduce the speed beyond the reduction ratio in the following table, attach an intermediate gearhead (reduction ratio: 10) between the reducer and motor. In that case, the permissible torque is 60N·m.

Allowance Torque Unit: 上段 Upside (N.m) / 下段 Belowside (kgf.cm)

Motor/Gearhead	Gear Ratio	3	3.6	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180
		Speed (rpm)	1000	833	600	500	400	333	240	200	166	120	100	83	60	50	40	33	30	25	20
S6D250-24GU-30S	6GU□RC/	1.57	1.88	2.61	3.13	3.92	9.83	13.6	8.70	10.4	14.5	17.4	20.9	26.1	31.3	39.2	47.0	52.2	60.0	60.0	60.0
	6GU□RT	16.0	19.2	26.6	3.19	40.0	100	139	88.7	106	148	177	213	266	319	340	479	532	600	600	600

■ Dimensions (Unit mm)

