



整理 整顿 清洁 清扫 素养 安全





Contents •

P03 | About Siggear

P04 | The Main Products

P05 | Development Experience

P07 | The Enterprise Architecture

P08 | Team To Introduce

P09 | Management

P10 | Why Choose Siggear?

P11 | Factory Equipment

P13 | SIG-PG Series

P25 | Other Precision Hardware

ShenZhen SigGear S&T Co., LTD

Huizhou Siggear Drive Machinery CO.,LTD



About Sigear



SigGear, Global Micro Drive System Manufacturer.

We focus on micro-drive system's design, development and manufacturing. We provide drive system solutions, including drive structure design, drive operation design, drive system model production, drive system testing and bulk supply, full range of services to world-wide customers. Our main products are, planetary gear box, gear box, worm gear and other transmission systems and their components.

Founded in September 2008, after eight years of development, SigGear owns a group of highly qualified technical workers in gear and gearbox production, a number of automated high-precision machining equipments, as well as key Know-How of gears' and gearboxes' design and manufacturing.

Since 2010, SigGear has concentrated on the design, development and production of planetary gearboxes. Our transmission systems and solutions were provided for the customers' products, for example: sweeping robots, smart toilets, children accompany robots, security intelligent monitoring, medical equipment, beauty equipment, unmanned aerial vehicles, 4G base station signal converter, ATM, car central locking system, car intelligent tailgate, e-Bicycle, e-power tools, office intelligence, musical metronome, etc.

At the same time, the company carried out a management reorganization, from family business into a modernized enterprise. Advanced management tools were used, formal management standards were introduced. 2016 SigGear got the ISO9001 quality management system certification. TS16949 certification is in process, which is expected to be passed in July. In 2017 SigGear will enter Germany and found a

SigGear, we do professional, we do the best!

The Main Products

- Planetary gear box
- Plastic gear
- The worm gear
- Metal worm
- Other precision hardware





Development Experience



2008.09.16

西格成立,开始生产齿轮、蜗杆 Siggear Set up production gear, worm



2007

公司创始人开始传动零件贸易活动 Company founder began trading transmission parts



2009

采购零件、装备行星齿轮箱 Purchasing parts, gear planetary gear box



独立生产行星齿轮箱 Independent production planet gear box



2014

撑杆齿轮箱设计开发 Start car tail gate poles gear box design and development



设立西格科技,成立研发中心 Set up a Siggear company of science and technology, set up research and

2016

设立惠州西格,成立生产基地

Set up in huizhou Siggear company, set up production bases



第一套扫地机器人 齿轮箱供货 The first set of sweeping

robot gearbox supply





第一套牙医手机行星齿轮箱供货 The first set of dentist phone planet gear box



2017

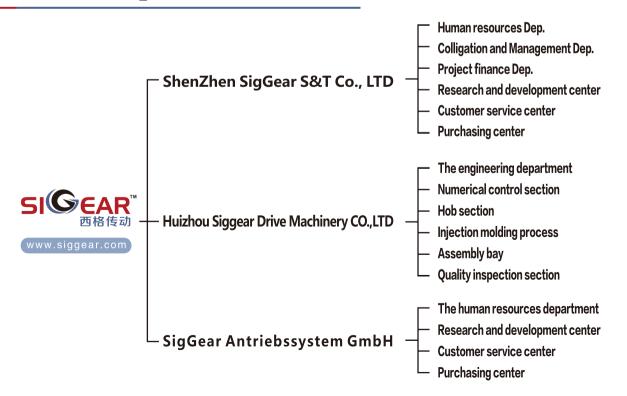
company

设立德国西格 Set up a Siggear German

05 SHENZHEN SIGGEAR S&T CO., LTD



The Enterprise Architecture



Team To Introduce

Concentrate on, professional, focused on the gearbox production and manufacturing, Design, research and development, production in a body.





07 | SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com | 08



Management

Decentralized management:

Take the flat, to the center of the management structure, not because of a person, not because it positioned, no principle, hierarchy, break original department Settings, only set position, position, reduce the link of information communication, improve the efficiency of management.

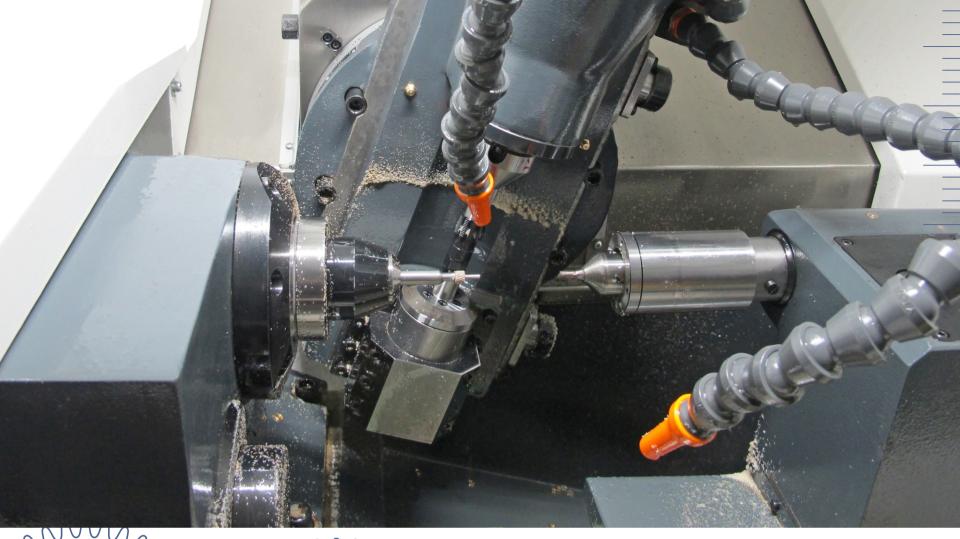
Internal procurement mode:

Turn the various functional departments, workshop section, for the independent cost benefit assessment unit, procurement center purchase order to the customer service center, to research and development center procurement plan, purchasing products to stages, companies gain profit from the procurement center, maximize has clear each functional departments.

ERP, MIS construction:

Manage all resources use ERP system, internal data, formed its own technical data accumulation; Through the external data interface, expansion of? technical data analysis ability.





Jan Manny Ma

Why Choose Siggear?

Siggear, a professional manufacturer of miniature planetary gearboxes, Offer the most cost-effective drive solutions according to customer requirements. Siggear was founded in 2008, dominates the core KNOW-HOW of the design and production of the planetary gear. Every 30-60 days from design to styling, a technical upgrade ist completed. The current product has covered almost all of the micro - drive systems, including automotive, household robots, unmanned aerial vehicles, medical and beauty equipment, power tools, etc.

The modern production plants process the raw materials imported from Germany and Japan under non-dust conditions. Our company is certified according to ISO9001 and TS6949 Quality Assurance System and has more than 10 years of industry experience. Despite the high quality of our products, we are still more cost-effective against similar products. we are suppliers to Siemens, Eaton, ZTE, Dongfeng Peugeot Citroen Automobile, Shanghai Volkswagen, SAIC, and other large companies. Our products are exported to many countries in Europe, East Asia, the Middle East and the Americas.

To provide a better service for German and European customers, Siggear has established a subsidiary in Aachen, Germany on May 2017.

Contact us and roll the world together!













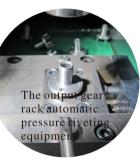


Noise test room

11 SHENZHEN SIGGEAR S&T CO., LTD

















SIGEAR THE PLANT OF THE PARTY O

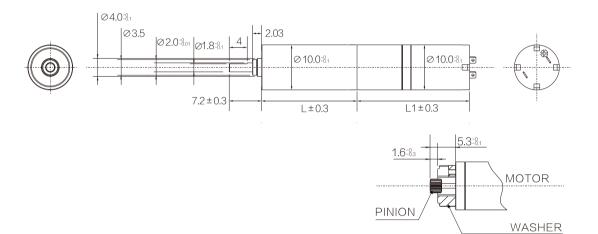
SIG-PG10

Housing material	Metal	Backlash,	at no-lo	oad	≤3°C
Bearing at output		SI	eeve be	earings	
Radial load(5mm from flange)			≤100	ıgf	
Shaft axial load		≤200gf			
Shaft press fit force, max			≤500	ıgf	
Radial play of shaft			≤0.05r	nm	
Thrust play of shaft			≤0.3n	nm	



Appearance Size

unit:mm



□ ⊕ unit:mm

Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.17	15	20°	Ø0.99	Practicable

Gearboxes Specifications

Reduction ratio	1/4	1/16	1/64	1/256	1/1024	1/4096
Rated tolerance torque	50	100	300	400	500	600
Max momentary tolerance torque	150	300	900	1200	1500	1800
Efficiency	85%	75%	65%	55%	45%	40%
Length (L)	11.4	14	16.6	19.2	24.4	27.4
Weight(g)/Sleeve bearings	6.2	7.2	8.2	10.2	11.2	13.2

Operating relative humidity: 20%~85%RH

©Operating temperature range: −10°C~+60°C

Can according to customer requirements and installation speed change size.

SIG Series



SIG-PG12

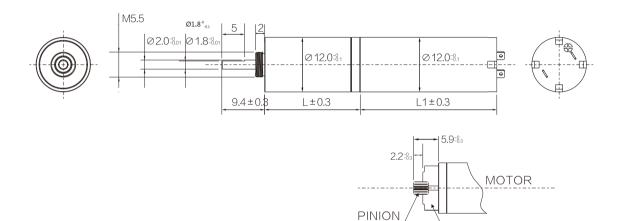
Housing material M	etal	Backlash,at no-load	≤3℃
Bearing at output		Sleeve bearings	
Radial load(5mm from flar	nge)	≤0.5kgf	
Shaft axial load		≤0.5kgf	
Shaft press fit force, max	X	≤1.5kgf	
Radial play of shaft		≤0.05mm	
Thrust play of shaft		≤0.3mm	



Appearance Size

unit:mm

WASHER





Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.25	15	20°	Ø1.49	1/4,1/16,1/64,1/256 1/1024,1/4096
0.25	15	20°	Ø1.49	1/4.5,1/20,1/91 1/410,1/1845

Gearboxes Specifications

Reduction ratio	1/4 1/4.5	1/16 1/20	1/64 1/91	1/256 1/410	1/1024 1/1845	1/4096
Rated tolerance torque	0.8	1.2	1.6	1.8	2.0	2.0
Max momentary tolerance torque	2.4	3.6	4.8	6.0	6.0	6.0
Efficiency	85%	75%	65%	55%	45%	40%
Length (L)	12.8	16.1	19.4	22.7	26.0	29.3
Weight(g)/Sleeve bearings	12.6	14.7	16.8	18.9	21.0	23.1

Operating relative humidity: 20%~85%RH

©Operating temperature range: −10°C~+60°C

Can according to customer requirements and installation speed change size.

13 SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com | 14



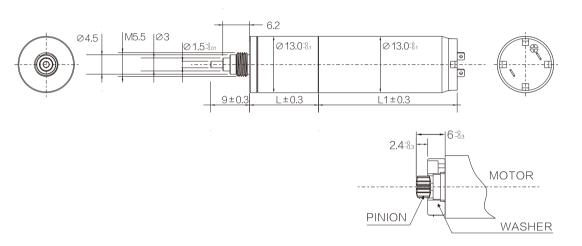
SIG-PG13

Housing material Metal	Backlash,at no-load ≤3°C
Bearing at output	Sleeve bearings
Radial load(5mm from flange)	≤0.5kgf
Shaft axial load	≤0.5kgf
Shaft press fit force,max	≤1.5kgf
Radial play of shaft	<0.05mm
Thrust play of shaft	<0.3mm



Appearance Size

unit:mm





Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.3	11	20°	Ø1.49	Practicable

Gearboxes Specifications

Reduction ratio	1/4	1/16	1/64	1/256	1/1024	1/4096
Rated tolerance torque	0.8	1.2	1.6	1.8	2.0	2.0
Max momentary tolerance torque	2.4	3.6	4.8	5.4	6.0	6.0
Efficiency	85%	75%	65%	55%	45%	40%
Length (L)	10.2	13.5	16.8	20.1	23.4	26.7
Weight(g)/Sleeve bearings	11.2	13.3	15.4	17.5	19.6	21.7

Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

SIG Series



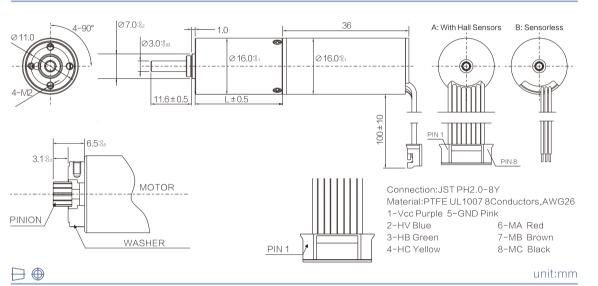
SIG-PG16

Housing material Metal	Backlash,at no-load ≤3℃
Bearing at output	Sleeve bearings
Radial load(5mm from flange)	≤0.5kgf
Shaft axial load	≤0.5kgf
Shaft press fit force,max	≤1.5kgf
Radial play of shaft	<0.05mm
Thrust play of shaft	≤0.3mm



Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.3	9	20°	Ø1.99	1/4.5,1/20,1/91 1/410,1/1845
0.3	9	20°	Ø1.99	1/4,1/16,1/64 1/256,1/1024,1/4096

Gearboxes Specifications

Reduction ratio	1/4 1/4.5	1/16 1/20	1/64 1/91	1/256	1/410	1/1024	1/1845
Rated tolerance torque	1.0	1.5	2.0	2.5	2.5	3.0	3.0
Max momentary tolerance torque	3.0	4.5	6.0	7.5	7.5	9.0	9.0
Efficiency	80%	70%	60%	50%	50%	40%	40%
Length (L)	15.05	18.7	22.35	26	26	29.65	29.65
Weight(g)/Sleeve bearings	19.0	23.0	27.0	31.0	31.0	35.0	35.0

Operating relative humidity: 20%~85%RH

⊙Operating temperature range: -10°C~+60°C

Can according to customer requirements and installation speed change size.

15 | SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com 16

Operating temperature range: -10℃~+60℃



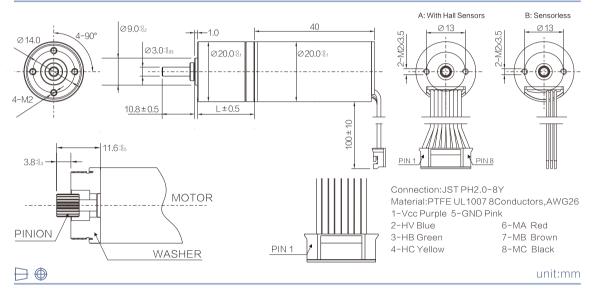
SIG-PG20

Housing material Metal	Backlash,at no−load ≤3℃
Bearing at output	Sleeve bearings
Radial load(5mm from flange)	≤1kgf
Shaft axial load	≤0.7kgf
Shaft press fit force, max	≤5kgf
Radial play of shaft	≤0.05mm
Thrust play of shaft	≤0.3mm



Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.3	12	20°	Ø2.99	1/4.75,1/22.5,1/107.2,1/509
0.3	15	20°	Ø2.99	1/4,1/16,1/64,1/256,1/1024
0.3	18	20°	Ø2.99	1/3.5,1/12.3,1/42.9,1/150,1/525.2,1/1838

Gearboxes Specifications

Reduction ratio	1/3.5,1/4,1/4.75	1/12.3,1/16,1/22.5	1/42.9,1/64,1/107.2	1/150,1/256,1/509	1/1024,1/525.21/1838
Rated tolerance torque	1.0	1.5	2.0	2.5	3.0
Max momentary tolerance torque	3.0	4.5	6.0	7.5	9.0
Efficiency	80%	70%	60%	50%	40%
Length (L)	14.4	18.05	21.70	25.35	29.0
Weight(g)/Sleeve bearings	26.0	30.0	34.0	39.0	43.0

Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

SIG Series

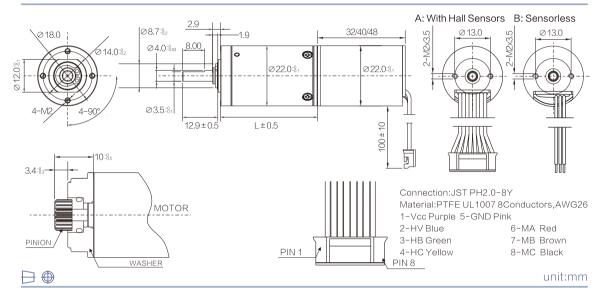
SIG-PG22

	Housing material	Metal	Backlash,at no-load	≤3℃	
	Bearing at out	put	Sleeve bearings		
	Radial load(5mm fro	m flange)	≤1kgf		
Shaft axial load			≤0.7kgf		
Shaft press fit force,max			<6kgf		
	Radial play of s	haft	≤0.05mm		
Thrust play of shaft			<0.3mm		



Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.4	9	20°	Ø2.99	1/6,1/36,1/216,1/1296
0.4	12	20°	Ø2.99	1/4.75,1/22.5,1/107.2,1/509
0.4	15	20°	Ø2.99	1/4,1/16,1/64,1/256,1/1024
0.4	18	20°	Ø2.99	1/3.5,1/12.3,1/42.9,1/150,1/525.2,1/838.3

Gearboxes Specifications

Reduction ratio	1/3.5,1/4 1/4.75,1/6	1/12.3,1/16 1/22.5,/1/36	1/42.9,1/64 1/107.2,1/216	1/150,1/256 1/509,1/525.2	1/1024,1/1296 1/1838.3
Rated tolerance torque	1.0	1.5	2.0	2.5	3.0
Max momentary tolerance torque	3.0	4.5	6.0	7.5	9.0
Efficiency	80%	70%	60%	50%	40%
Length (L)	14.4	31.0	21.70	25.35	29.0
Weight(g)/Sleeve bearings	27.0	31.0	35	40	44.0

Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

17 SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com 18

Operating temperature range: -10℃~+60℃

Operating temperature range: -10℃~+60℃



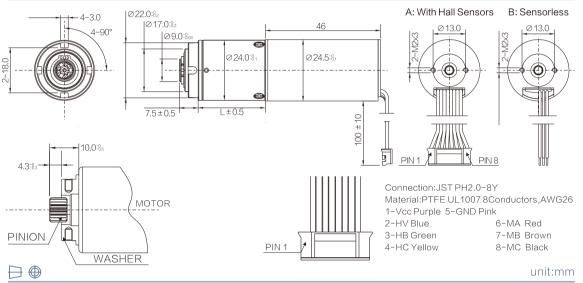
SIG-PG24

Housing material	Metal	Backlash,at no-load	≤3°C
Bearing at ou	tput	Sleeve bearings	;
Radial load(5mm fro	om flange)	≤1kgf	
Shaft axial lo	ad	≤0.7kgf	
Shaft press fit for	ce,max	≤6kgf	
Radial play of s	shaft	≤0.05mm	
Thrust play of	shaft	<0.3mm	



Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.4	9	20°	Ø2.99	1/6.67,1/44.5,1/296.7,1/1979
0.4	12	20°	Ø2.99	1/5.25,1/27.5,1/144.7,1/759.7,1/3988
0.4	15	20°	Ø2.99	1/4.4,1/19.4,1/85,1/374,8,1/1649
0.4	18	20°	Ø2.99	1/3.83,1/14.7,1/56.2,1/215.4,1/825,1/3159.7
0.4	21	20°	Ø2.99	1/3.43,1/11.8,1/40.35,1/38.4,1/474.8,1/1628.4

Gearboxes Specifications

Reduction ratio	1/3.43,1/3.83 1/4,1/5.25,1/6.67	1/11.8,1/14.7 1/19.4,1/27.5,1/44.5			1/1628.4,1/1649 1/1979,1/3159.7,1/3988
Rated tolerance torque	2.0	3.0	4.0	5.0	5.0
Max momentary tolerance torque	6.0	9.0	12.0	15.0	18.0
Efficiency	80%	70%	60%	50%	40%
Length (L)	23.3	29.5	35.7	41.9	48.1
Weight(g)/Sleeve bearings	46	51	58	65	72

Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

SIG-PG28

Housing material Me	etal	Backlash,at no-load	≤3°C	
Bearing at output		Sleeve bearings		
Radial load(5mm from flan	ge)	≤1kgf		
Shaft axial load		≤0.7kgf		
Shaft press fit force, max		≤6kgf		
Radial play of shaft		<0.05mm		
Thrust play of shaft		<0.3mm		



Appearance Size

unit:mm

unit:mm

	Ø 17.0-3₂		A: With Hall Sensors	B: Sensorless
4-90°	Ø8.0 -8 ₆₆ -1.6	45/54/64		× 17.0
Ø21.0	10.0 Ø28.0-81	Ø 28.0°8.1	01/.0 	017.0
4-M2.5 i	Ø6.0-8-1 1.9±0.5 L±0.5	⊕ 0 1 1 1 1		
4.8-8.3	15.0%	9	PIN 1 PI	<u> </u>
	MOTOR		Connection:JST PH2.0-8 Material:PTFE UL1007 8	Conductors,AWG26
PINION	WASHER		I-Vcc Purple 5-GND Pir 2-HV Blue 3-HB Green 4-HC Yellow	6-MA Red 7-MB Brown 8-MC Black

Pinion Specifications

 \Rightarrow

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.5	8	20°	Ø3.99	1/6.75,1/45.5,1/307.5
0.5	11	20°	Ø3.99	1/5.18,1/26.8,1/139,1/720
0.5	14	20°	Ø3.99	1/1.285,1/18.3,1/78.7,1/337.3,1/845.9
0.5	17	20°	Ø3.99	1/3.7,1/13.7,1/50.65,1/187.4,1/693.4

Gearboxes Specifications

Reduction ratio	1/3.7,1/4.285 1/5.18,1/6.75	1/13.7 1/18.3	1/26.8 1/45.5	1/50.65 1/78.7	1/139	1/187,1/307.5 1/337.3,1/693.4 1/845.9,1/720
Rated tolerance torque	2.0	3.0	4.0	6.0	8.0	10.0
Max momentary tolerance torque	6.0	9.0	12.8	18.0	24.0	30.0
Efficiency	80%	70%	60%	60%	60%	50%
Length (L)	24.5	30.9	37.3	37.3	37.3	43.7
Weight(g)/Sleeve bearings	70	80	93	93	93	107

Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

19 SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com 20

Operating temperature range: -10℃~+60℃

Operating temperature range: -10℃~+60℃

SIGEAR

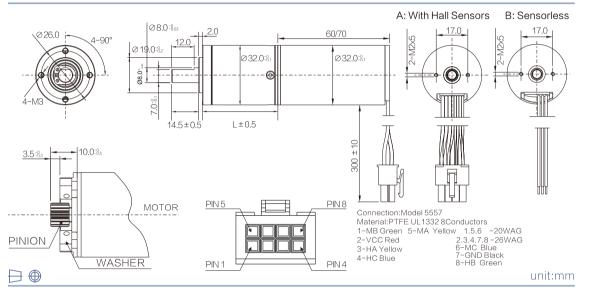
SIG-PG32

Backlash,at no-load ≤3°0
Sleeve bearings
≤3kgf
≤2.5kgf
≤10kgf
<0.08mm
≤0.3mm



Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.5	10	20°	Ø4.99	1/6,1/36,1/216,1/1296
0.5	13	20°	Ø4.99	1/4.85,1/23.5,1/114,1/522.9
0.5	16	20°	Ø4.99	1/4.125,1/17,1/70.2,1/289.5,1/1194.2
0.5	19	20°	Ø4.99	1/3.63,1/13.2,1/47.85,1/173.7,1/1630.5
0.5	22	20°	Ø4.99	1/3.27,1/10.7,1/35,1/374

Gearboxes Specifications

Reduction ratio	1/3.27,1/3.63, 1/4.125,1/4.85,1/6	1/10.7,1/13.2,1/17	1/23.5,1/35 1/36,1/47.85	1/70.2	1/114	1/173.7,1/216 1/289.5,1/374,1/552.9 1/630.5,1/1194.2
Rated tolerance torque	2.0	4.0	6.0	8.0	10.0	12.0
Max momentary tolerance torque	6.0	12.0	18.0	24	30	36.0
Efficiency	80%	70%	70%	60%	60%	50%
Length (L)	20.6	27.0	27.0	33.4	33.4	39.8
Weight(g)/Sleeve bearings	101	121	121	146	146	172

Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

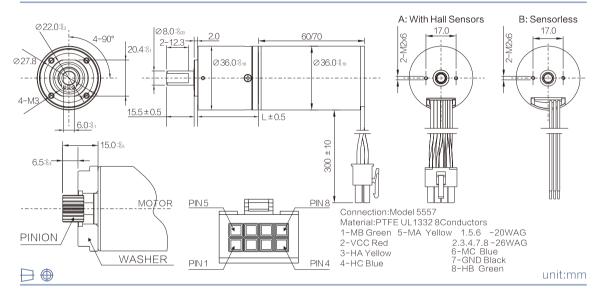
SIG-PG36

Housing material Metal	Backlash,at no-load ≤3°C
Bearing at output	Sleeve bearings
Radial load(5mm from flange)	≤5kgf
Shaft axial load	≤3kgf
Shaft press fit force, max	≤15kgf
Radial play of shaft	≤0.08mm
Thrust play of shaft	≤0.3mm



Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.6	11	20°	Ø4.99	1/5.18,1/26.8,1/139,1/720
0.6	14	20°	Ø4.99	1/4.28,1/18.3,1/78.4,1/335.5
0.6	17	20°	Ø4.99	1/3.7,1/13.7,1/50.65,1/187.4,1/693.4
0.6	20	20°	Ø4.99	1/3.3,1/10.9,1/35.9,1/118.6,1/391.38

Gearboxes Specifications

Reduction ratio	1/3.3,1/3.7 1/4.28,1/5.18	1/10.9,1/13.7 1/18.3	1/26.8 1/35.9	1/50.65 1/78.4	1/118.6 1/139	1/335.5 1/391.38	1/693.4 1/720
Rated tolerance torque	3.0	8.0	10.0	18.0	20.0	25.0	30.0
Max momentary tolerance torque	9.0	24.0	30.0	54.0	60.0	75.0	90.0
Efficiency	80%	70%	70%	60%	60%	50%	50%
Length (L)	33.1	41.8	50.5	50.5	50.5	59.2	59.2
Weight(g)/Sleeve bearings	132	172	212	212	212	252	252

[○]Operating relative humidity: 20%~85%RH

Can according to customer requirements and installation speed change size.

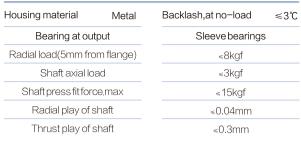
21 SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com | 22

Operating temperature range: -10℃~+60℃

Operating temperature range: -10℃~+60℃

SIGEAR[™] 西格传动

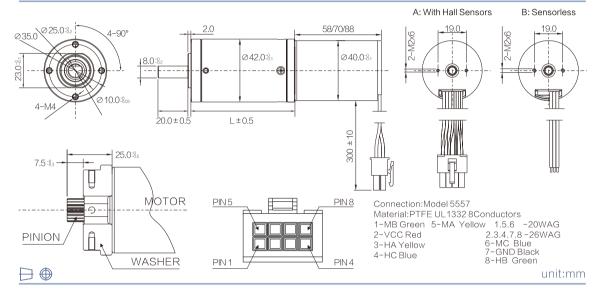
SIG-PG42





Appearance Size

unit:mm



Pinion Specifications

Module	No. of teeth	Pressure angle	Hole diameter	Reduction ratio
0.6	7	20°	Ø5.99	1/8.57,1/73.4,1/629
0.6	10	20°	Ø5.99	1/6.3,1/39.69,1/250,1/1575.3
0.6	13	20°	Ø5.99	1/5.07,1/25.7,1/130.3,1/660.7,1/3350
0.6	16	20°	Ø5.99	1/4.313,1/18.6,1/80.2,1/346,1/1492.4
0.6	19	20°	Ø5.99	1/3.789,1/14.36,1/54.4,1/206,1/781,1/2959
0.6	22	20°	Ø5.99	1/3.41,1/11.63,1/135.2,1/461,1/1572.3

Gearboxes Specifications

Operating relative humidity: 20%~85%RH

Reduction ratio	1/3.41,1/3.789,1/4.313 1/5.07,1/6.3,1/8.57	1/11.63,1/14.36,1/18.6 1/25.7,1/39.69	1/54.4,1/80.2,1/73.4	1/130.3,1/135.2	1/206,1/250,1/346	1/461,1/629 1/660.7,1/781	1/1492.4,1/1572.3,1/1575.3 1/2959,1/3350
Rated tolerance torque	5.0	10.0	18.0	20.0	25.0	30.0	30.0
Max momentary tolerance torque	15.0	30.0	54.0	60.0	75.0	90.0	90.0
Efficiency	80%	70%	60%	60%	50%	50%	40%
Length (L)	32.5	39.2	45.9	45.9	52.6	52.6	59.6
Weight(g)/Sleeve bearings	139	191	231	281	281	281	326

© Operating temperature range: −10°C~+60°C

Can according to customer requirements and installation speed change size.

Custom type planetary gear motor series Servo planetary gear motor



Bone drill special planet gear motor







Optical sensing planetary gear motor



The yacht antenna rotating planet gearbox



The electric elevator planet gearbox



Dental planet gearbox



Intelligent robot planetary gear motor

23 SHENZHEN SIGGEAR S&T CO., LTD www.siggear.com 24









SIGEAR[™] 西格传动

Plastic gear



Copper gear



Metal worm



Plastic planet gearbox



200

Metal gear



2942

2953

26 mm series motor

2946

2965