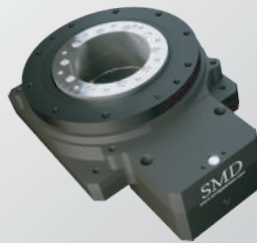


SMD GEARBOX



SMD

BRILLIANTLY AGILE!



HIGH PRECISION SERVO GEARBOX

CONTENTS

- 02 COMPANY INTRODUCTION
- 03 PRODUCTS
- 04 SNP SERIES - PLANETARY GEARBOX WITH SHAFT END
- 10 SNDU SERIES - PLANETARY GEARBOX WITH FLANGE END
- 13 SS SERIES - RIGHT ANGLE GEARBOX
- 17 ST SERIES - HOLLOW ROTARY GEARBOX
- 21 SCSG SERIES - HARMONIC GEARBOX WITH SOLID SHAFT END
- 24 SSHG SERIES - HARMONIC GEARBOX WITH HOLLOW SHAFT END

**Research
And
Development**

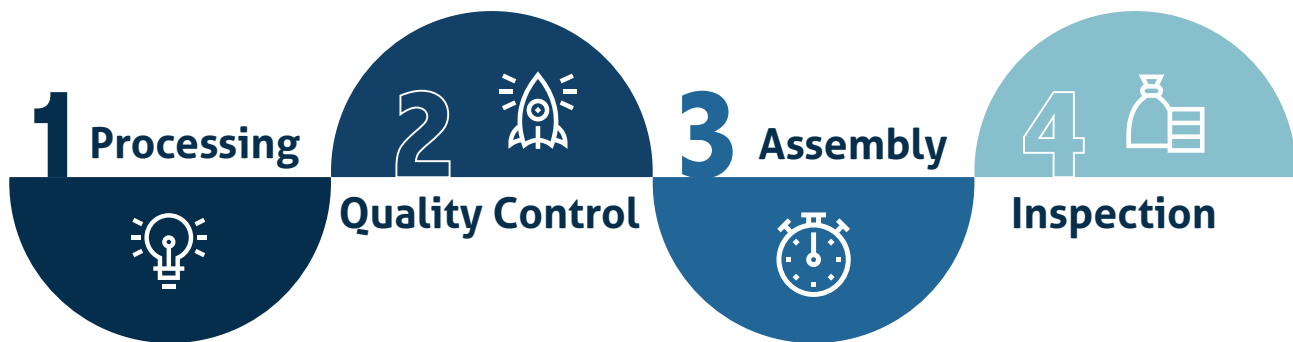


**Advance
Production
Machinery**



**Accurate
Control
System**





About us

Our Company Name SMD stands for SEIMITSU MOTION DRIVES as a trailblazer in the manufacturing of various types of industrial Gearbox in Taiwan. SMD is one of the largest manufacturer and exporter of Gearbox as well as Motion Products. SMD earned their position in the market as professional manufacture of mechanical products, which specialize in designing, planning, production and sales of integrity. With the innovation and passion, we are committed to being your best business partner in the field of Gearbox and motion technology.

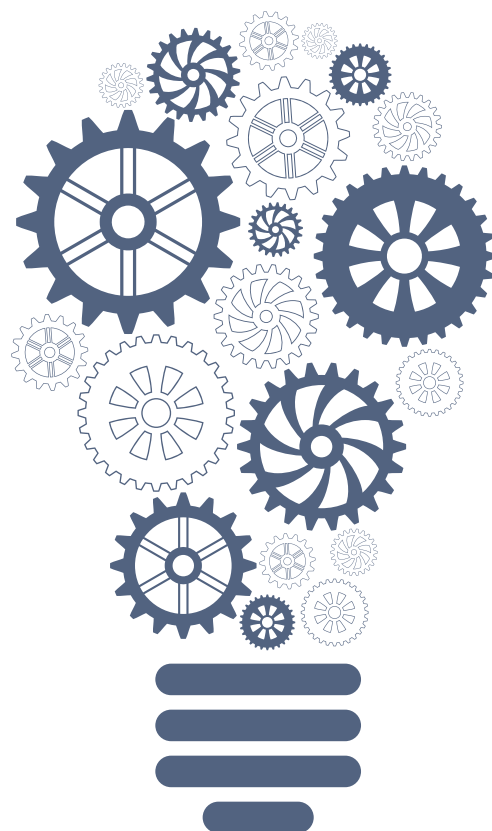
We have experienced technocrats and engineers in our team who are continuously developing the best quality gearbox that satisfied customer requirements. Teamwork and innovation create a great work environment.

What We Provide

SMD provides patented products including the very popular backlash free Ball Reducer , back- lash free Right Angle Gearbox (SS series), highly accurate Hollow Rotary Platform Gear Reducer (ST series) and precision Planetary Gearhead (SNP series).

Why Choose Us

As a company we focused on research and development, SMD has produced a wide range of gearboxes which contributes to the growth of industry. In doing so, we have accumulated technical expertise that electrify our progress. We are continuous working to increase our development speed.



Planetary Gearbox

SNP Series



SNDU Series



Hollow Rotary Gearbox

ST Series



Right-Angle Gearbox

SS Series



Harmonic Gearbox

SSHG Series



SCSG Series



SNP SERIES - Planetary Gearbox With Shaft End



SNP **060**

Model Name Square Profile

L1

Stage
L1- Single
L2- 2 Stage

005

Ratio
1:3~1:100

S **B** **A**

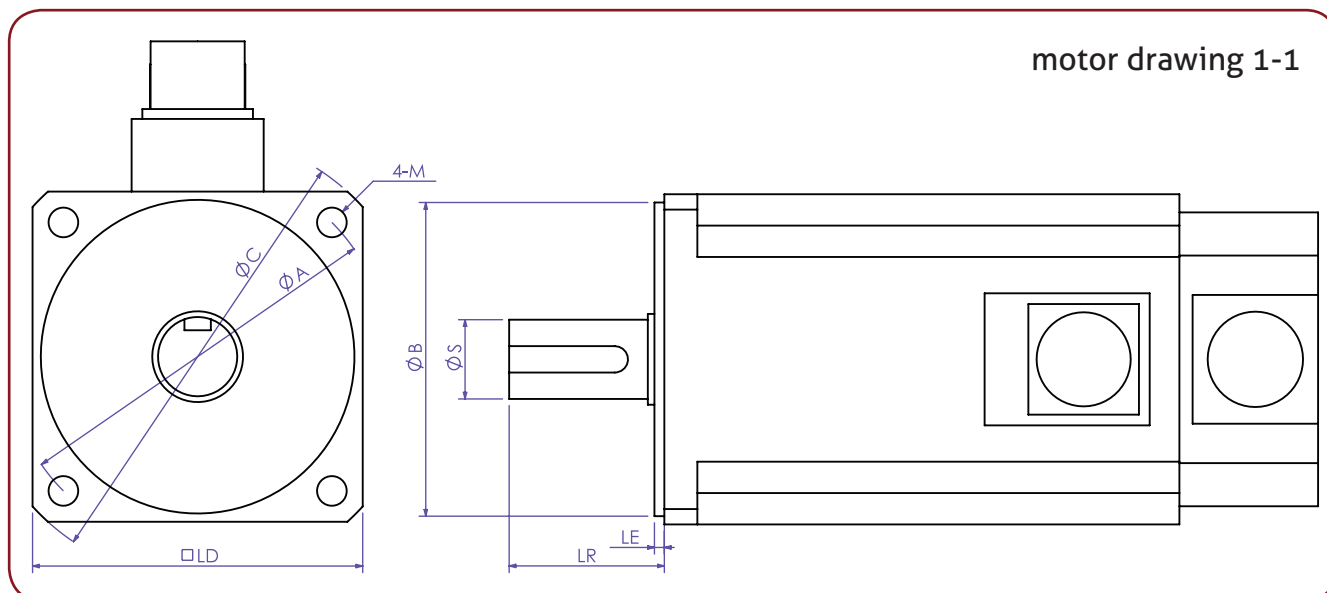
Refer Motor
Drawing 1-1

SNP 040
SNP 060
SNP 090

42X42mm
60X60mm
92X92mm

SNP 120
SNP 150

115X115mm
142X142mm



Feature

- » High rating torque and low inertia.
- » Suitable for Combination with any kind of motors.
- » Total enclosed design. Easy installing and combination.
- » The design of long shaft is suitable to driven by rack and simplify the mechanism.

Specification Chart

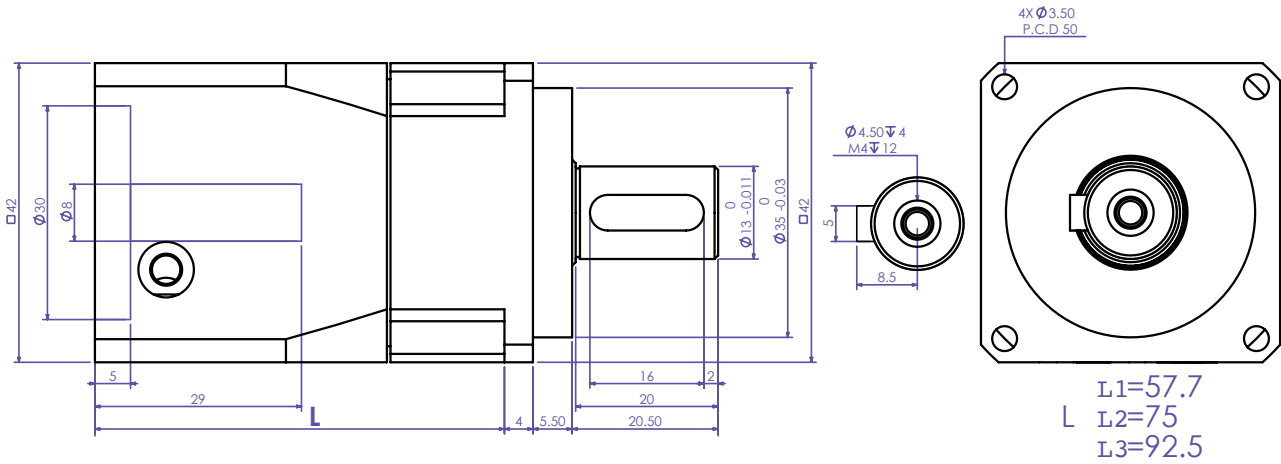
| Performances | Unit | Stages | Ratio | SNP40 | SNP60 | SNP90 | SNP120 | SNP150 |
|---------------------------------|------------|-----------|----------|--|------------|-----------|-----------|-----------|
| Nominal Output torque | Kgf*m/Nm | 1 | 3 | N/A | 3.1/ 30.38 | 12.9/ 126 | 26/ 254 | 51/ 500 |
| | | | 4 | 1.6/ 15.68 | 4.2/41.16 | 13.2/ 129 | 27/ 264 | 53/519 |
| | | | 5 | 1.7/16.66 | 4.3/42.14 | 14.4/141 | 30/294 | 54/529 |
| | | | 7 | 1.5/ 14.7 | 4/39.2 | 13.4/131 | 24/235 | 50/490 |
| | | | 9 | N/A | N/A | N/A | 25/245 | N/A |
| | | | 10 | 1.3/ 12.74 | 3.8/37.24 | 12.6/123 | 19/186 | 42/411 |
| | | 2 | 9 | N/A | 3.1/ 30.38 | 12.9/ 126 | N/A | 51/ 500 |
| | | | 12 | 1.4/ 13.72 | 4.2/41.16 | 12.9/ 126 | 26/ 254 | 51/ 500 |
| | | | 15 | 1.7/16.66 | 4.3/42.14 | 14.4/141 | 26/ 254 | 51/ 500 |
| | | | 16 | 1.6/ 15.68 | 4.2/41.16 | 13.2/ 129 | 27/ 264 | 53/519 |
| | | | 20 | 1.6/ 15.68 | 4.2/41.16 | 14.4/141 | 27/ 264 | 53/519 |
| | | | 21 | 1.5/ 14.7 | 3.1/ 30.38 | 12.9/ 126 | 26/ 254 | 51/ 500 |
| | | | 25 | 1.7/16.66 | 4.3/42.14 | 14.4/141 | 30/294 | 54/529 |
| | | | 28 | 1.6/ 15.68 | 4.2/41.16 | 13.2/ 129 | 27/ 264 | 53/519 |
| | | | 30 | 1.3/ 12.74 | 3.1/ 30.38 | 12.9/ 126 | 30/294 | 51/ 500 |
| | | | 35 | 1.7/16.66 | 4.3/42.14 | 14.4/141 | 30/294 | 54/529 |
| | | | 40 | 1.6/ 15.68 | 4.2/41.16 | 13.2/ 129 | 27/ 264 | 53/519 |
| | | | 49 | 1.5/ 14.7 | 4/39.2 | 13.4/131 | 24/235 | 50/490 |
| | | | 50 | 1.7/16.66 | 4.3/42.14 | 14.4/141 | 30/294 | 54/529 |
| | | | 70 | 1.5/ 14.7 | 4/39.2 | 13.4/131 | 24/235 | 50/490 |
| 100 | 1.3/ 12.74 | 3.8/37.24 | 12.6/123 | 19/186 | 42/411 | | | |
| Max Acceleration Torque | Kgf*m/Nm | 1,2 | 3~100 | 3 times Nominal Output Torque | | | | |
| Emergency Stop Torque (2) | Kgf*m/Nm | 1,2 | 3~100 | 3.4 times Nominal Output Torque | | | | |
| Permissible Input Speed (P1)(3) | rpm | 1,2 | 3~100 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Reduced Backlash (P1) | Arc-min | 1 | 3~10 | 1 | 1 | 1 | 1 | 1 |
| | | 2 | 9~100 | ≤1 | ≤1 | ≤1 | ≤1 | ≤1 |
| Permissible Input Speed (3) | rpm | 1,2 | 3~100 | 3000 | 3000 | 3000 | 3000 | 3000 |
| Standard Backlash | Arc-min | 1 | 3~10 | 15 | 5 | 5 | 6 | 6 |
| | | 2 | 9~100 | 30 | 10 | 9 | 11 | 11 |
| Max. radial force (mid shaft) | Kgf/N | 1,2 | 3~100 | 70/ 686 | 110/ 1078 | 350/ 3459 | 465/ 4557 | 626/ 6134 |
| Max. axial force | Kgf/N | 1,2 | 3~100 | 35/ 343 | 55/ 539 | 175/ 1729 | 232/ 2278 | 313/ 3067 |
| Allowable Input Shaft Diameter | mm | 1,2 | 3~10 | 5-8 | 6.35-14 | 11-24 | 19-35 | 20-38 |
| Rated life (4) | hr | 1,2 | 3~100 | 10,000 At permissible input speed and nominal output torque. | | | | |
| Operating Temperature Range | | 1,2 | 3~100 | -10°C to +40°C ambient --90°C max operating case temperature | | | | |
| Sound level | dB (A) | 1 | 3~10 | 62 | 62 | 65 | 65 | 70 |
| | | 2 | 9~100 | 62 | 62 | 65 | 65 | 70 |
| Lubrication | - | 1,2 | 3~100 | Lubricated for life (Synthetic Grease) | | | | |
| Protection class | - | 1,2 | 3~100 | IP54 | | | | |
| Gearhead Inertia | Kgf*cm2 | 1 | 3~10 | 0.049 | 0.127 | 1.247 | 2.274 | 10.19 |
| | | 2 | 9~100 | 0.049 | 0.127 | 1.247 | 2.274 | 10.19 |
| Efficiency at full load | % | 1,2 | 3~100 | 95 % for 1 stage and 90 % for 2 stage | | | | |
| Weight | Kg | 1 | 3~10 | 0.4 | 1.1 | 3.3 | 6.8 | 13.8 |
| | | 2 | 9~100 | 0.5 | 1.3 | 4.5 | 8.3 | 14 |
| No-load running torque | Kgf*m/Nm | 1 | 3~10 | 0.51/0.05 | 3/ 0.3 | 6.1/0.6 | 12/1.2 | 14.8/1.4 |
| | | 2 | 9~100 | 0.51/0.05 | 3/0.3 | 6.1/0.6 | 12/1.2 | 14.8/1.4 |

» Please contact SMD for 3 stage ratios.

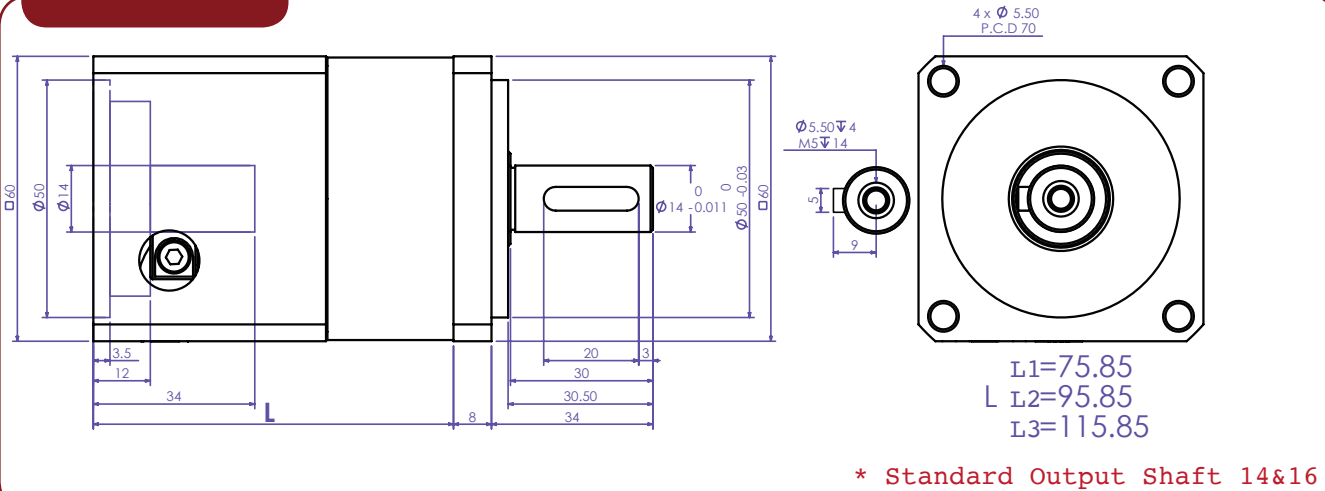
» For input speeds above 3000 rpm, please consult us, with application details.

Mechanical Dimensions

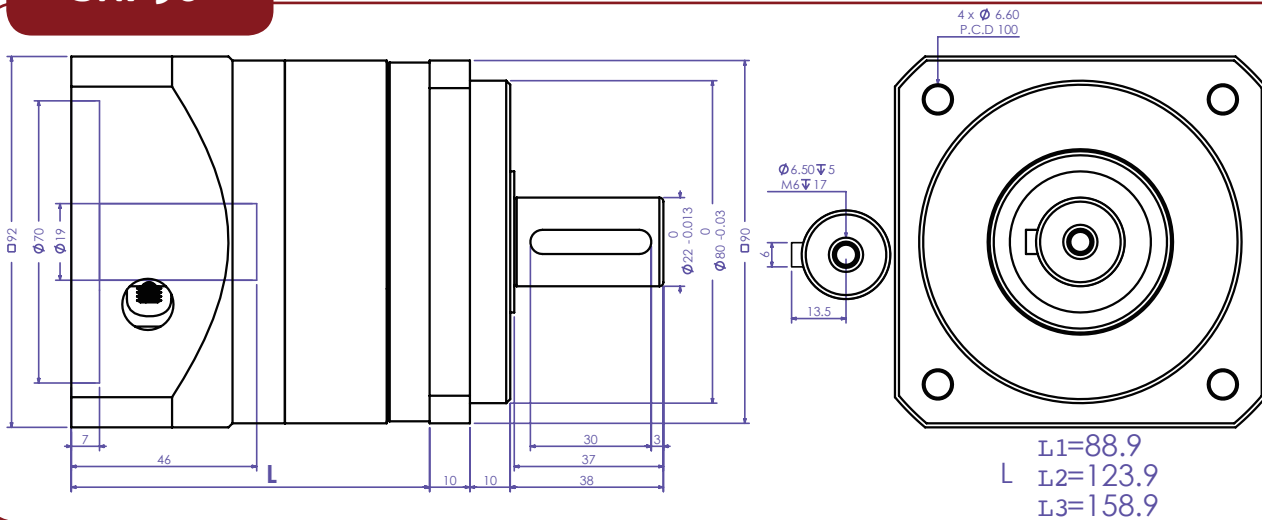
SNP40



SNP60



SNP90



Introducing SMD Planetary Gearbox P1 Type

SMD Planetary Gearbox P1 Type

4 Reasons To Increase 50% Production



Exclusive product,
Backlash 1 arc-min

Increase machine
working speed & stability

Low vibration

Increase production
efficiency & quantity

SMD Planetary Gearbox P1 Type



SNDU Series - Planetary Gearbox With Flange End



SNDU **060**

Model Name Square Profile

L1

Stage
L1- Single
L2- 2 Stage

005

Ratio
1:3~1:100

S **B** **A**

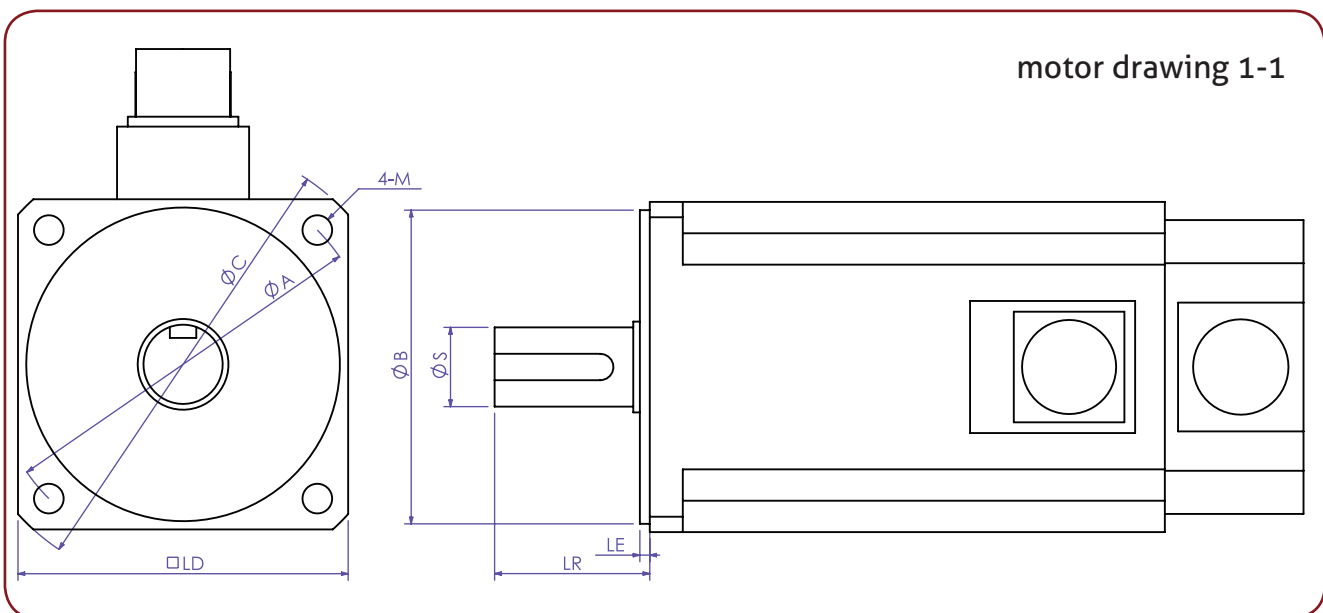
Refer Motor
Drawing 1-1

SNDU 060
SNDU 090

60X60mm
92X92mm

SNDU120
SNDU150

130X130mm
180X180mm



Feature

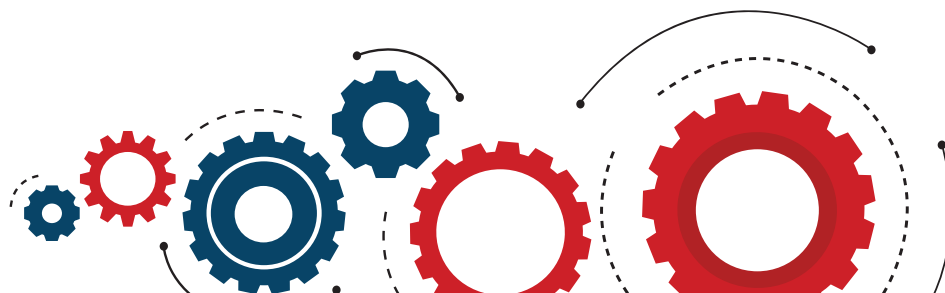
- » Special output structure for rotating disk (flange) rigidity.
- » Attach Load directly onto disk for rotating, save space and simplify mechanism.
- » Has crossed roller bearing for rigid rotation, precise positioning and high axial and radial force capability.
- » Lubricated for life.

Specification Chart

| Performances | Unit | Stages | Ratio | SNDU60 | SNDU90 | SNDU120 | SNDU150 |
|----------------------------------|----------|----------|------------|--|-------------|-------------|-------------|
| Nominal output torque | Kgf*m/Nm | 1 | 3 | 2.7/26.4 | 9/88.2 | 18.2/178.3 | 35.7/349.8 |
| | | | 4 | 2.9/28.4 | 9.2/90.1 | 18.9/185.2 | 37.1/363.5 |
| | | | 5 | 3/29.4 | 10/98 | 21/205.8 | 38.5/377.3 |
| | | | 7 | 2.8/27.4 | 9.1/89.1 | 11.2/109.7 | 35/343 |
| | | | 9 | N/A | N/A | 17.5/171.5 | N/A |
| | | | 10 | 2.6/25.4 | 8.8/86.2 | 10.5/102.9 | 34.3/336.1 |
| | | 2 | 9 | 2.7/26.4 | 9/88.2 | N/A | 35.7/349.8 |
| | | | 12 | 2.7/26.4 | 9/88.2 | 18.2/178.3 | 35.7/349.8 |
| | | | 15 | 2.7/26.4 | 9/88.2 | 18.2/178.3 | 35.7/349.8 |
| | | | 16 | 2.9/28.4 | 9.2/90.1 | 18.9/185.2 | 37.1/363.5 |
| | | | 20 | 2.9/28.4 | 9.2/90.1 | 18.9/185.2 | 37.1/363.5 |
| | | | 21 | 2.7/26.4 | 9/88.2 | 18.2/178.3 | 35.7/349.8 |
| | | | 25 | 3/29.4 | 10/98 | 21/205.8 | 38.5/377.3 |
| | | | 28 | 2.9/28.4 | 9.2/90.1 | 18.9/185.2 | 37.1/363.5 |
| | | | 30 | 2.7/26.4 | 9/88.2 | 18.2/178.3 | 35.7/349.8 |
| | | | 35 | 3/29.4 | 10/98 | 21/205.8 | 38.5/377.3 |
| | | | 40 | 2.9/28.4 | 9.2/90.1 | 18.9/185.2 | 37.1/363.5 |
| | | | 49 | 2.8/27.4 | 9.1/89.1 | 11.2/109.7 | 35/343 |
| | | | 50 | 3/29.4 | 10/98 | 21/205.8 | 38.5/377.3 |
| | | | 70 | 2.8/27.4 | 9.1/89.1 | 11.2/109.7 | 35/343 |
| 100 | 2.6/25.4 | 8.8/86.2 | 10.5/102.9 | 34.3/336.1 | | | |
| Max Acceleration Torque | Kgf*m/Nm | 1,2 | 3~100 | 3 Times Nominal Output Torque | | | |
| Emergency Stop Torque (2) | Kgf*m/Nm | 1,2 | 3~100 | 3.4 Times Nominal Output Torque | | | |
| Permissible Input Speed (3) | rpm | 1,2 | 3~100 | 1000 | | | |
| Reduced Backlash(P1) | Arc-min | 1 | 3~10 | <1 | <1 | <1 | <1 |
| | | 2 | 9~100 | 1 | 1 | 1 | 1 |
| Max Tilting moment | Kgf*m/Nm | 1,2 | 3~100 | 3.75/36.75 | 13.7/134.26 | 27.48/269.3 | 37.38/366.3 |
| Max. radial force (5) | Kgf/N | 1,2 | 3~100 | 214/2097 | 442/4331 | 687/6732 | 779/7634 |
| Max. axial force (5) | Kgf/N | 1,2 | 3~100 | 107/1048 | 221/2165 | 343.5/3366 | 389.5/3817 |
| Rated life (4) | H | 1,2 | 3~100 | 10,000 | | | |
| Operating Temperature Range | °C | 12 | 3~100 | -10°C to +40°C ambient --90°C max operating case temperature | | | |
| Sound level | dB (A) | 1 | 3~100 | 63 | 66 | 68 | 70 |
| | | 2 | 9~100 | 63 | 66 | 66 | 68 |
| Lubrication | - | 1,2 | 3~100 | Lubricated for life (Synthetic Grease) | | | |
| Protection class | - | 1,2 | 3~100 | IP54 | | | |
| Gearhead Inertia | Kg*cm2 | 1 | 3~10 | 0.127 | 1.247 | 2.274 | 10.19 |
| | | 2 | 9~100 | 0.127 | 1.247 | 1.247 | 10.19 |
| Efficiency at full load rated(4) | % | 1,2 | 3~100 | Stage one 95% Stage two 90% | | | |
| Weight | Kg | 1 | 3~10 | 0.8 | 3 | 6.4 | 13 |
| | | 2 | 9~100 | 1.1 | 4.1 | 8.4 | 16 |
| No-load running torque | Kgf*m/Nm | 1 | 3~10 | 3/0.3 | 6.1/0.6 | 12/1.2 | 14.8/1.45 |
| | | 2 | 9~100 | 3/0.3 | 6.1/0.6 | 12/1.2 | 14.8/1.45 |

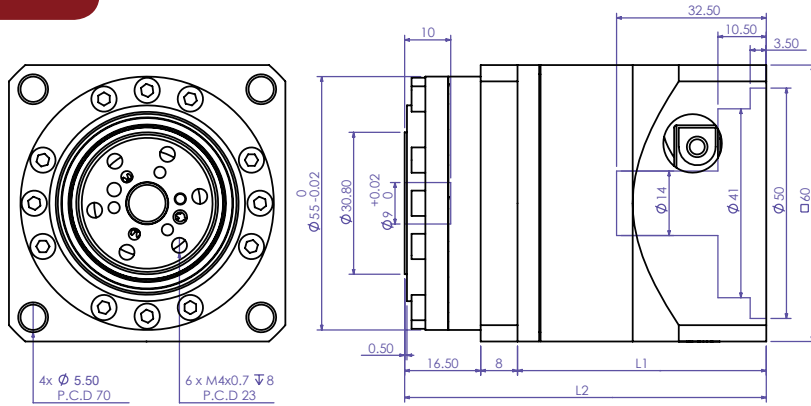
» Please contact SMD for 3 stage ratios.

» For input speeds above 3000 rpm, please consult us and provide application details.



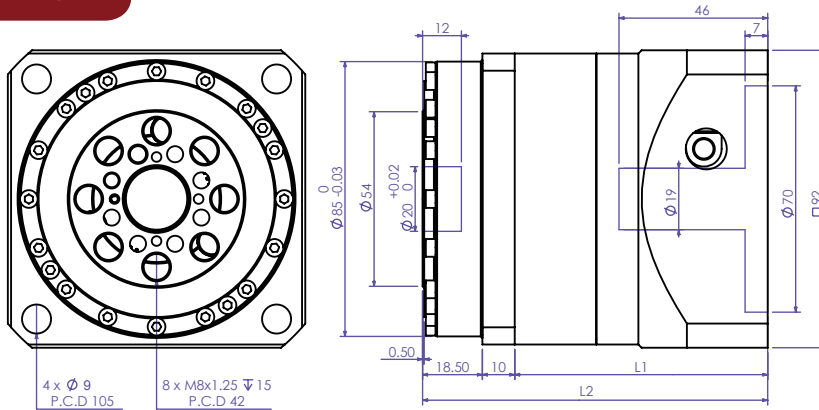
Mechanical dimension

SNDU60



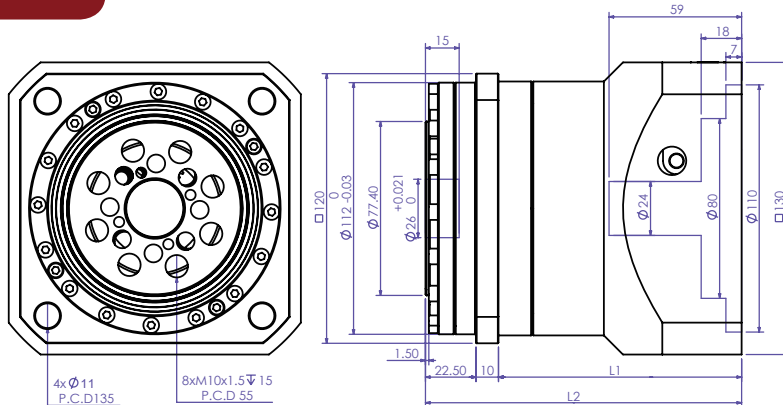
- L1
 L1=54
 L2=74
 L3=94
- L2
 L1=78.5
 L2=98.5
 L3=118.5

SNDU90



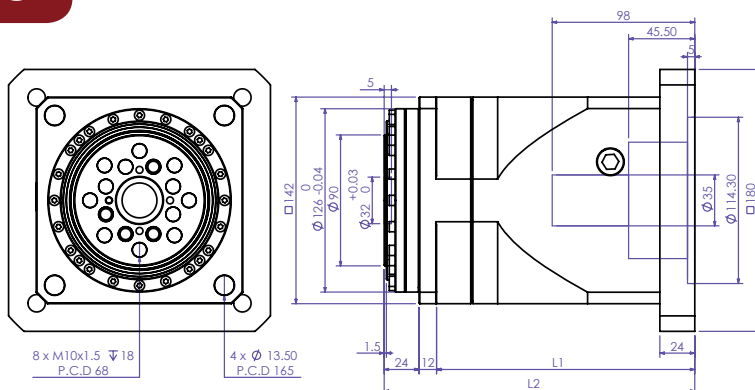
- L1
 L1=78.25
 L2=117.25
 L3=156.75
- L2
 L1=106.75
 L2=146.25
 L3=185.75

SNDU120



- L1
 L1=108.2
 L2=137.25
 L3=176.8
- L2
 L1=140.7
 L2=169.75
 L3=209

SNDU150



- L1
 L1=177.5
 L2=191.7
 L3=231.25
- L2
 L1=213.5
 L2=227.7
 L3=267.25

SS Series - Right Angle Gearbox



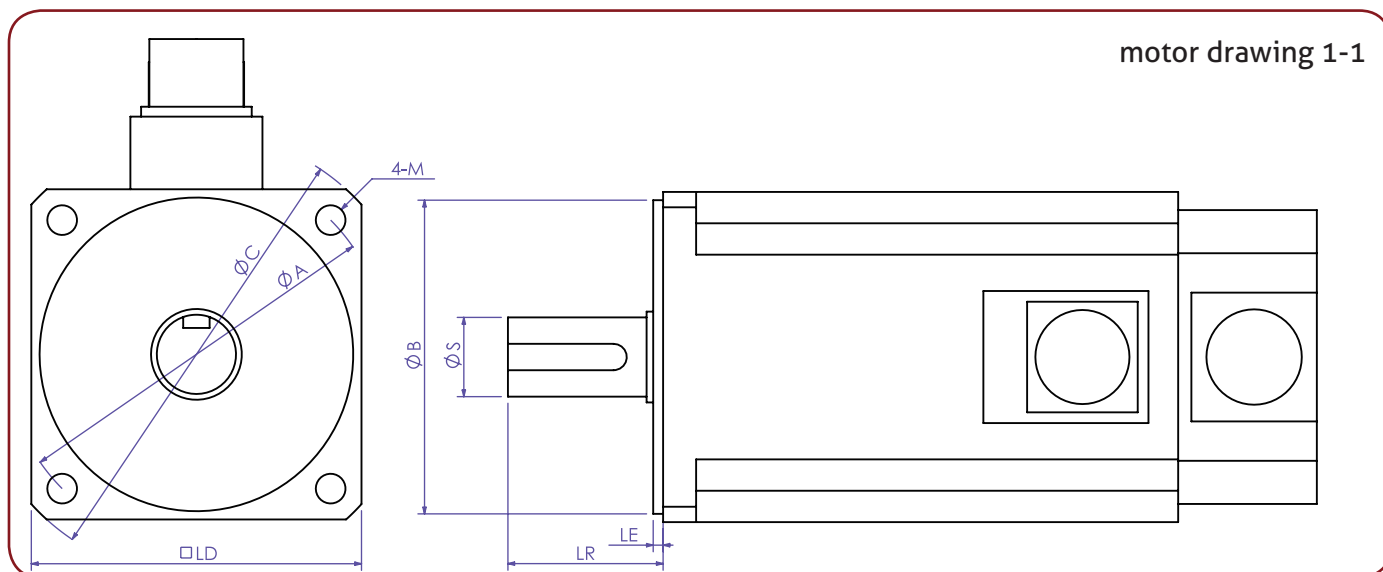
| | | | | | | |
|------------|----------------|--|--------------------|-------------------------|----------|----------|
| SS | 60 | F | 010 | S | B | A |
| Model Name | Square Profile | Output Shaft F-Hollow Shaft SF-Solid Shaft | Ratio 1:4~1:200 | Refer Motor Drawing 1-1 | | |

SS 070
SS 090
SS 120

70X70mm
92X92mm
115X115mm

SS 150
SS 180

142X142mm
182X182mm



Feature

- » Hollow Shaft and Solid Shaft.
- » Adjustable backlash and suitable low load and intermitted motion.
- » Hollow output shaft design for various applications and 5 mounting surfaces for flexible installations.
- » Arguably the easiest Right-Angle gearhead on the market to geometrically integrate into your machine. Rectangular "cube-like" geometry provides for easy fitting into your device. With 5 mounting surfaces, other components can be attached to the SS.

Specification Chart

| SS gearhead Type (1) (3) includes In-Line input type | Unit | SS42 SNP40 | SS70 SNP60 | SS90 SNP90 | SS120 SNP120 | SS150 SNP120 | SS180 SNP150 |
|---|--------------------|--|---------------|---------------|-----------------|-----------------|-----------------|
| Ratio | : | 1 | 2 | 2 | 2 | 2 | 2 |
| Nominal Output Torque | Kgf*m/Nm | 1.4 / 13.7 | 4.5 / 44.1 | 13.5 / 132 | 22.5 / 220 | 45 / 441 | 81 / 793 |
| Maximum Acceleration Torque | Kgf*m/Nm | 3 times nominal output torque | | | | | |
| Emergency Stop Torque | Kgf*m/Nm | 3.4 times nominal output torque | | | | | |
| Permissible Input Speed | rpm | 1500 | 1200 | 1000 | 800 | 800 | 500 |
| Permissible Output Speed | rpm | 1500 | 600 | 500 | 400 | 400 | 250 |
| Backlash | Arc-min | 6 | 3 | 3 | 3 | 3 | 3 |
| Maximum Radial Force | Kgf/N | 25/245 | 86/ 843 | 140/ 1373 | 250/ 2452 | 350/ 3432 | 550/ 5394 |
| Maximum Axial Force | Kgf/N | 12.5/ 118 | 43/ 422 | 70/ 686 | 125/ 1226 | 175/ 1716 | 257/2697 |
| Allowable Input Shaft Diameter | mm | 5-8 | 6.35-14 | 11-24 | 19-35 | 19-35 | 20-38 |
| Rated Operation Life | hr | 10,000 At permissible input speed and nominal output torque. | | | | | |
| Operating Temperature | °C | -10 °C to 40 °C (ambient) / 90 °C (case maximum temp.) | | | | | |
| Sound Level | dB | 62 | 65 | 65 | 70 | 70 | 70 |
| Mounting position & Lubrication | - | All Positions-Lubricated for life (Synthetic grease) | | | | | |
| Ingress Protection Class | IP | IP54 | | | | | |
| Direction of rotation | - | Motor and gearhead shaft opposite directions | | | | | |
| Gearhead Inertia | Kg*cm ² | 0.049 | 0.127 | 1.25 | 2.274 | 2.274 | 10.19 |
| Efficiency at Full Load | % | 1 Stage 85% - 2 Stage 80% | | | | | |
| Weight | kg | 1 | 2.2 | 5.7 | 12.5 | 17 | 52.1 |
| No Load Running Torque | Kgf*m/Nm | 0.51/0.05 | 3/0.3 | 6.1/0.6 | 12/1.2 | 12/ 1.2 | 14.8/1.45 |

» *SF* suffix indicates solid shaft -- the 42 size is available only with ratio 1 and solid output shaft.

» *SS42SF* ratios-- L1(1stage): 4,5,7,10; L2 (2stage): 12,15,16,20,21,25,28,30,35,40,49,50,70.

» *F* suffix indicates Hollow shaft is standard. However, "solid output shaft" and "double output shafts" are regular options.

» *SS 70 to SS150* ratios -- L1(1stage): 6,8,10,14,20 ; L2 (2stage): 18,24,30,32,40,42,50,56,60, 70,80,98,100,140,200. Please inquire for any ratio not shown.

Installed Precautions

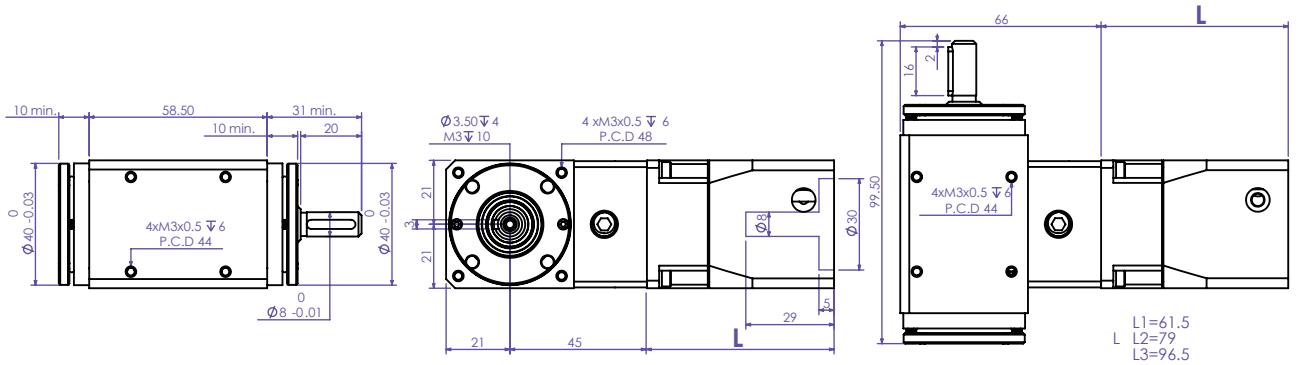
» It must be run through installing in right-angle Hollow Gearbox.

» The SS can install in deviation when running through yet:

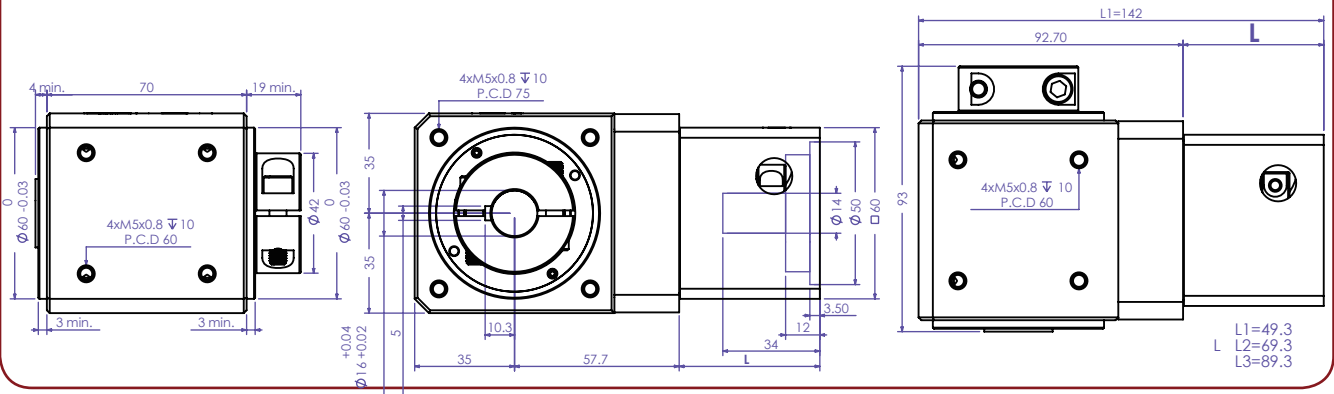
1. The deflection can't be greater than 0.5 degree.
2. The Eccentricity can't be greater than 0.03mm.

Mechanical dimension

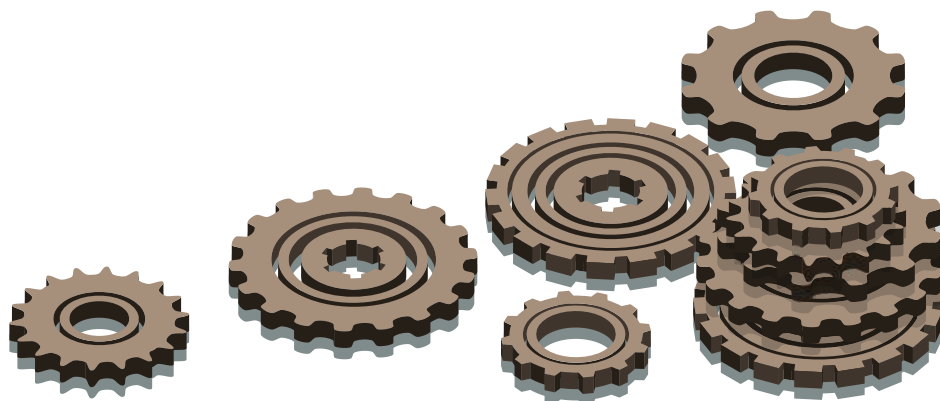
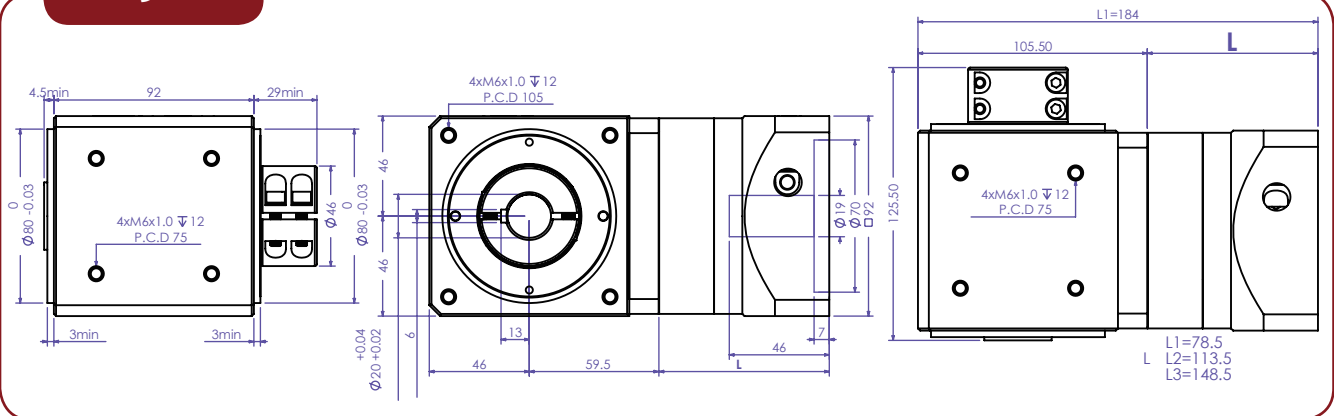
SS42SF



SS70F

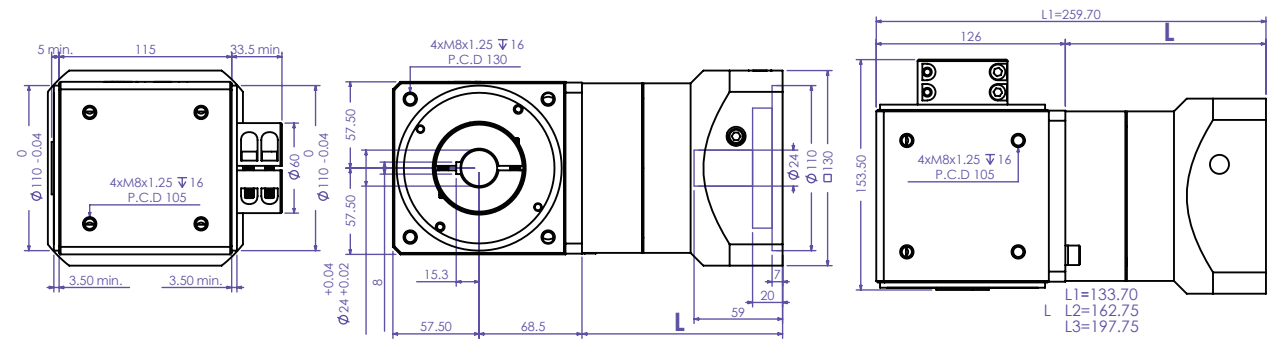


SS90F

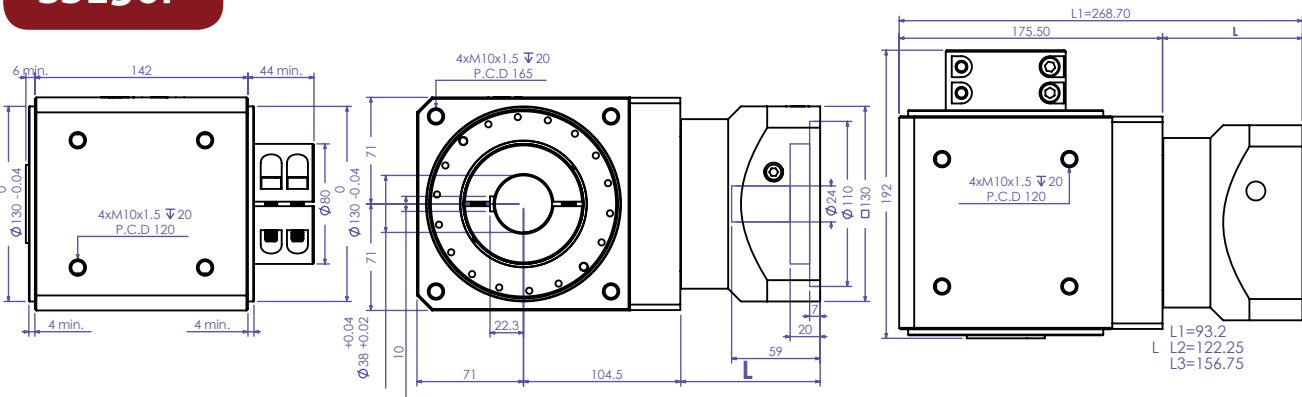


Mechanical dimension

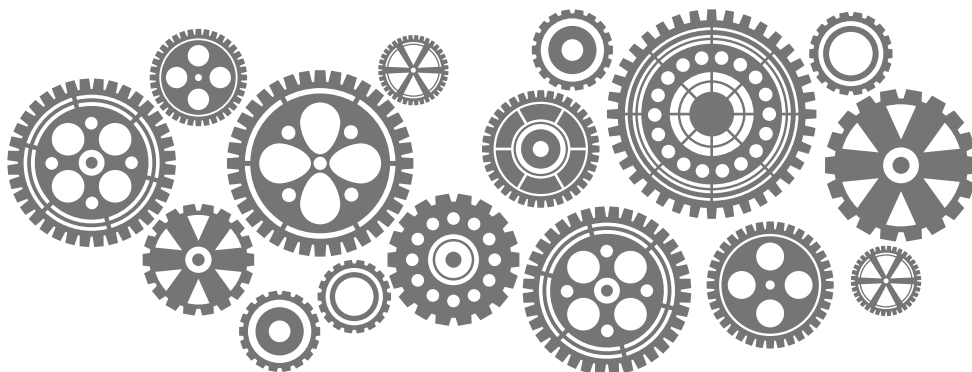
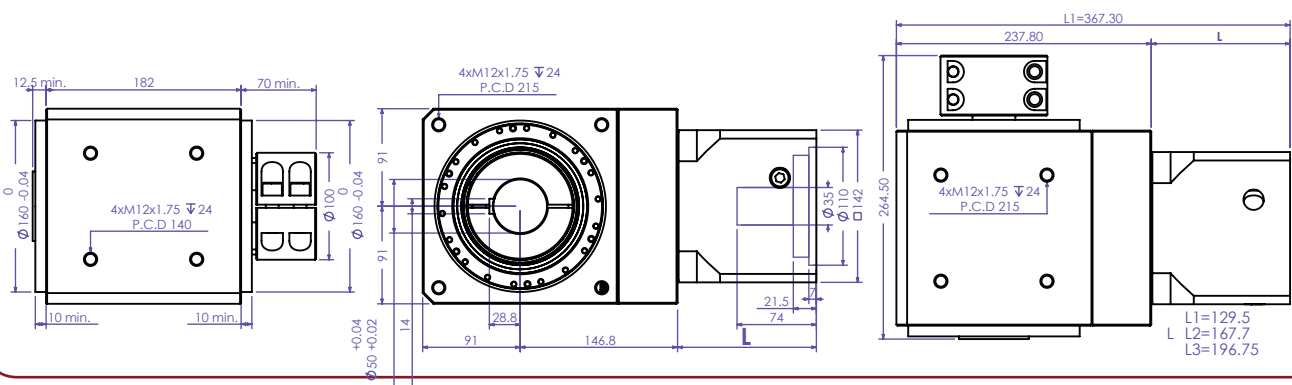
SS120F



SS150F



SS180F



ST Series-Hollow Rotary Gearbox



ST

085

010

S

B

A

Model
Name

Square
Profile

Ratio
1:10 and 1:30

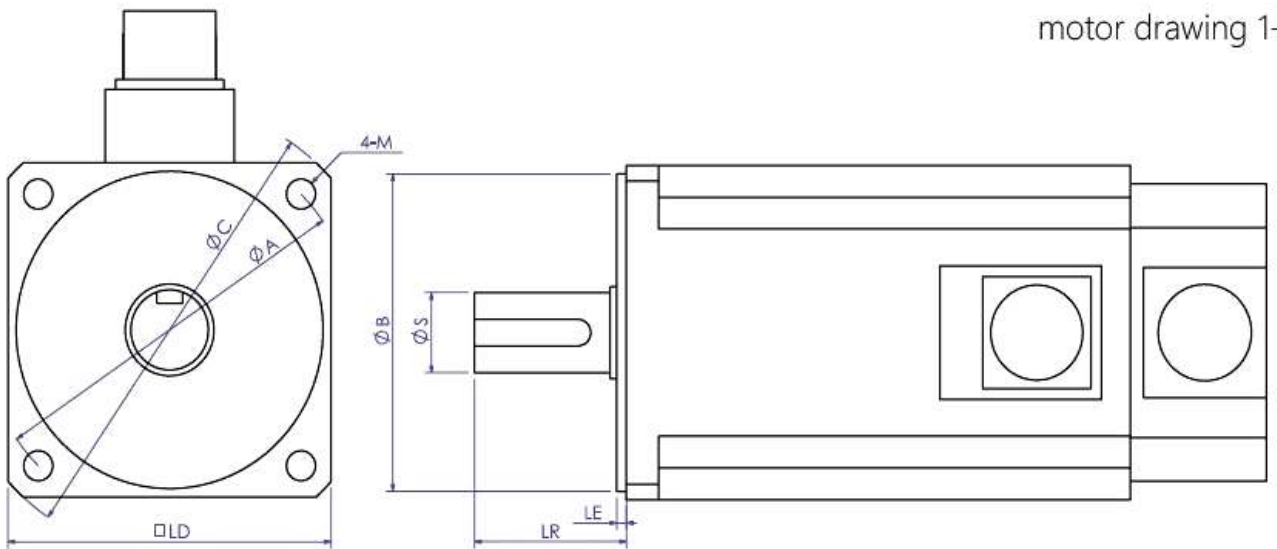
Refer Motor
Drawing 1-1

ST 060
SS 090

60X60mm
92X92mm

SS 120
SS 150

130X130mm
180X180mm



Feature

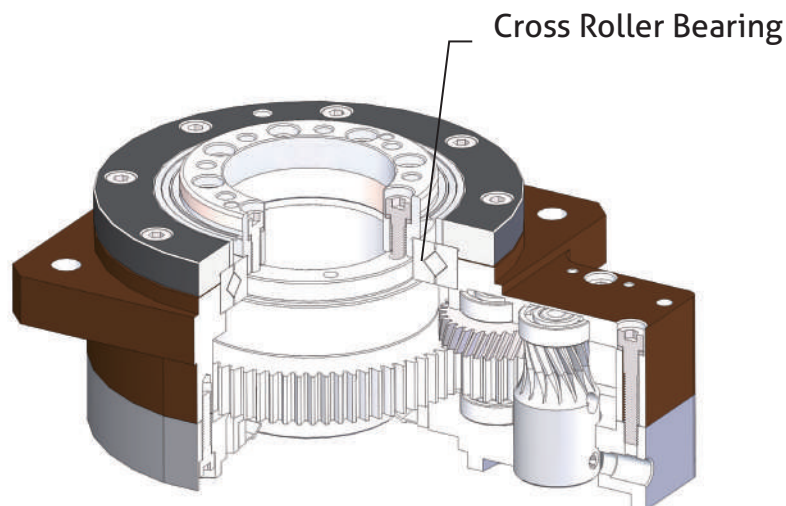
- » Max backlash Of 0.5 Arc min.
- » Large hollow rotary flange - hollow bore for wiring or shafts.
- » Hollow bore driven by your servo motor via large helical ring gear integrated in a rotating flange provides smooth, accurate and fast positioning & indexing.
- » Flange rotates on precision high capacity "crossed roller" type bearing for positional accuracy, rigidity and heavy axial loads.
- » Larger reduction ratios achievable by inputting with planetary or right angle gearhead

Specification Chart

| Performance | Unit | ST85 | ST130 | ST 200 | ST230 | ST280 | ST 320 |
|------------------------------------|--------------------|--|-----------|-----------|--------------|------------|------------|
| Ratio | : | 30 | 10 | 10 | 10 | 10 | 10 |
| Nominal Output Torque | Kgf*m/Nm | 0.51/4.99 | 5.1/50 | 6.63/65 | 8.67/85 | 9.18/90 | 14.3/140.3 |
| Maximum Acceleration Torque | Kgf*m/Nm | 3 times nominal output torque | | | | | |
| Emergency Stop Torque | Kgf*m/Nm | 3.4 times nominal output torque | | | | | |
| Permissible Input Speed | rpm | 3,000 | 3,000 | 600 | 600 | 600 | 600 |
| Standard Backlash | Arc-min | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| | Arc-sec | 30 | 30 | 30 | 30 | 30 | 30 |
| Max. tilting moment at flange face | Kgf*m/Nm | 1.02/10 | 8.4/84.32 | 14.28/140 | 65.97/646.45 | 95.5/939.9 | 347.1/3402 |
| Maximum radial load | Kgf/N | 50/490 | 200/1960 | 694/6801 | 835/8183 | 1000/9800 | 3214/31500 |
| Maximum axial load | Kgf/N | 25/245 | 100/980 | 347/3402 | 417.5/4091.5 | 500/4900 | 1607/15750 |
| Rated Operation Life | hr | 10,000 At permissible input speed and nominal output torque. | | | | | |
| Operating Temperature | °C | -10 °C to 40 °C (ambient) / 90 °C (case maximum temp.) | | | | | |
| Lubrication | - | Lubricated for life (Synthetic grease) | | | | | |
| Ingress Protection Class | IP | IP54 | | | | | |
| Gearhead Inertia | Kg*cm ² | 0.02 | 0.2 | 3.6 | 2.3 | 4.8 | 20 |
| Efficiency at Full Load | % | 80% | | | | | |
| Weight | Kg | 0.95 | 3.6 | 13.2 | 16.8 | 22.5 | 28.1 |
| No Load Running Torque | Kgf*m/Nm | 0.51/0.05 | 5.1/0.51 | 7.2/0.7 | 17/1.666 | 20/1.96 | 24.5/2.401 |

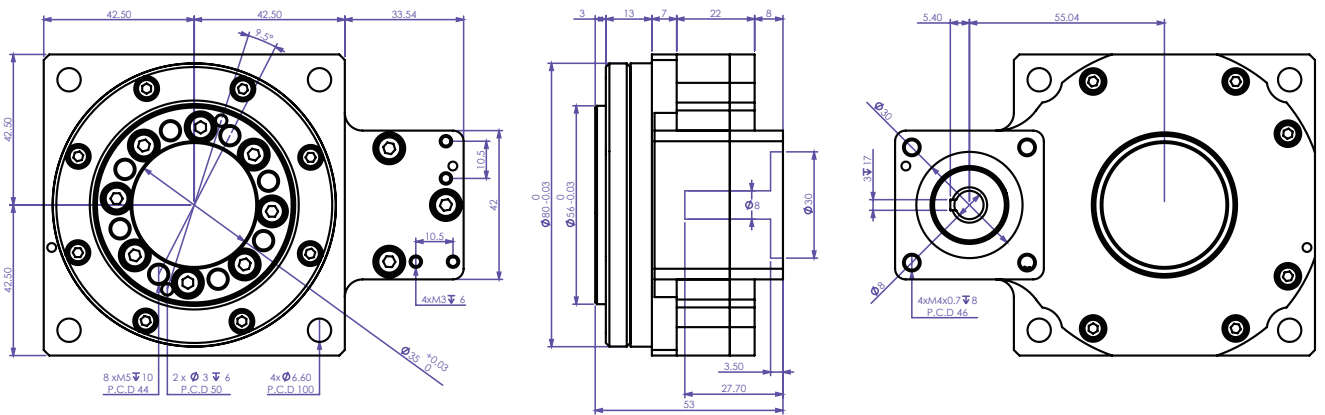
- » Larger reduction ratios possible by inputting with an in-line or right angle gearhead.
- » Efficiency at full load is 90%

ST Structure

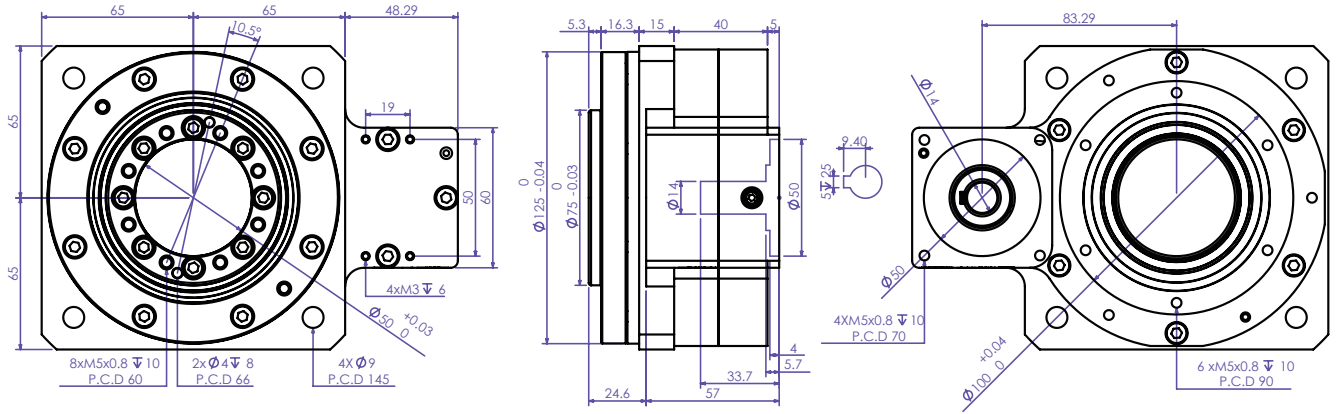


Mechanical dimension

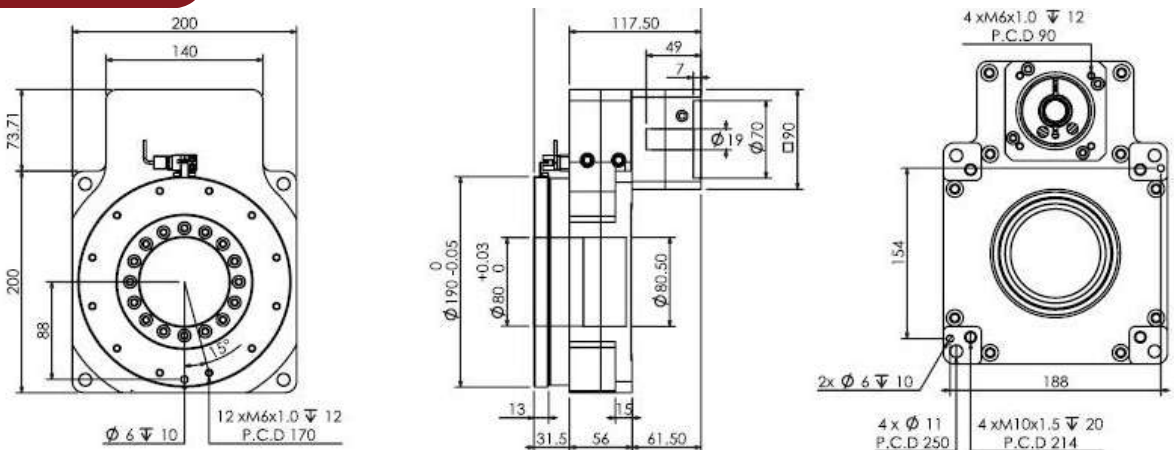
ST85



ST130



ST200



SCSG Series-Harmonic Series With Shaft End



SCSG **20**

Model Name Square Profile

50

Ratio
1:50, 1:80,
1:100, 1:120

S **B** **A**

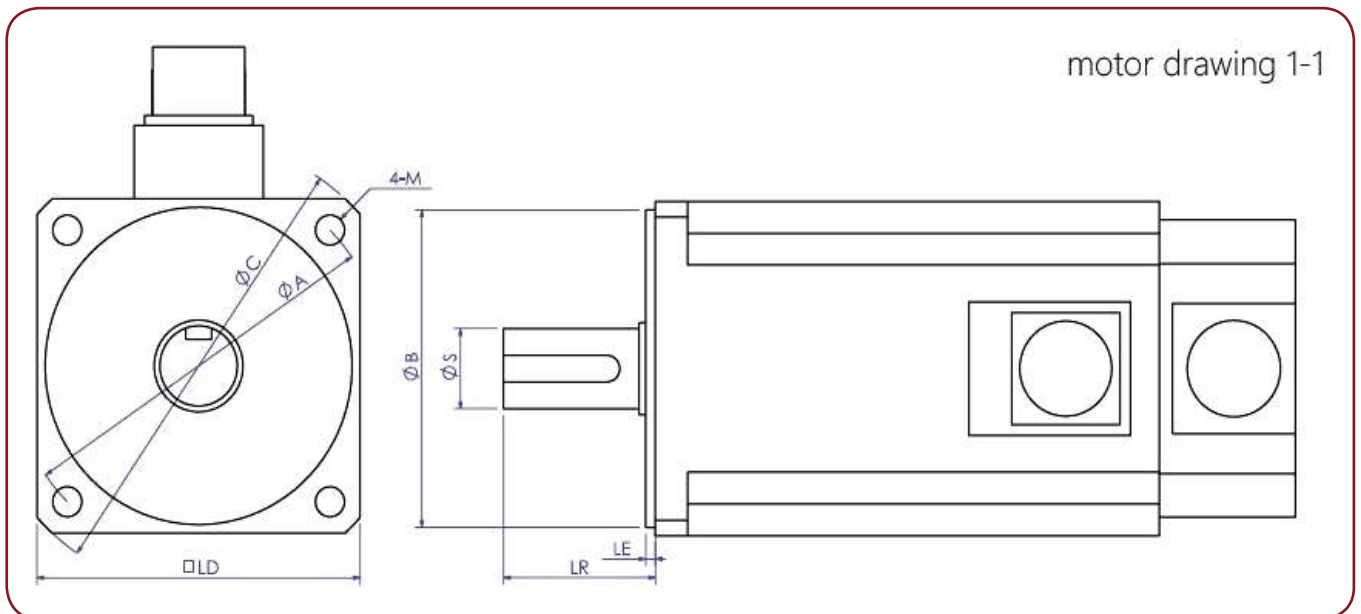
Refer Motor
Drawing 1-1

SCSG 17
SCSG 20

57.5X Ø79mm
67X Ø93mm

SCSG 25
SCSG 32

72X Ø107mm
89.5X Ø138mm



Feature

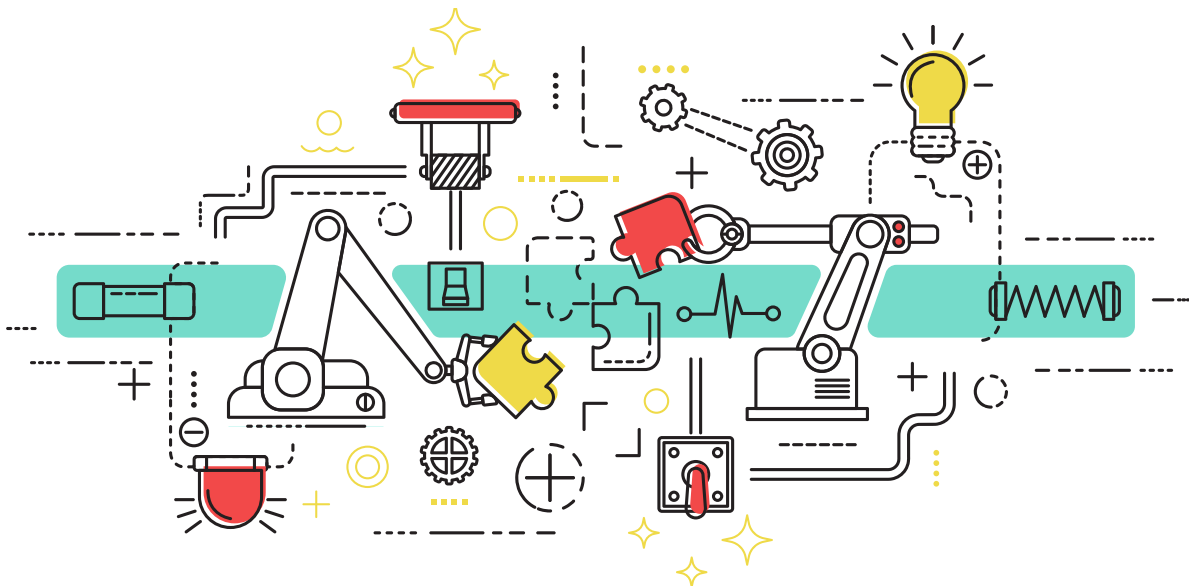
- » Diverse appearance; suitable for robot arm.
- » Short axial dimension.
- » High rigidity for stable precision work.
- » More compact and higher accurate.
- » Applied in robot industry, especially for multi-axis Robot joints

Specification Chart

| Performance | Unit | Ratio | SCSG17 | SCSG20 | SCSG25 | SCSG32 |
|-----------------------------------|-------------------------------------|--------|--|------------|-------------|-------------|
| Nominal Output Torque | Kgf*m/Nm | 50 | 2.1/20.58 | 3.3/32.34 | 5.2/50.96 | 10/98 |
| | | 80 | 2.9/28.42 | 3.61/35.5 | 8.30/81.5 | 15.5/152.5 |
| | | 100 | 3.1/30.5 | 5.3/51.94 | 8.81/86.5 | 18/176.4 |
| | | 120 | 3.1/30.5 | 5.3/51.94 | 8.81/86.5 | 18/176.4 |
| Maximum Acceleration Torque | Kgf*m/Nm | 50/120 | 3 times nominal output torque | | | |
| Emergency Stop Torque | Kgf*m/Nm | 50 | 9/91 | 13/127 | 25/242 | 51/497 |
| | | 80 | 12/113 | 17/165 | 34/332 | 75/738 |
| | | 100 | 15/143 | 20/191 | 38/369 | 86/841 |
| | | 120 | 11/112 | 20/191 | 40/395 | 91/892 |
| Permissible Input Speed | rpm | 50/120 | 3,500 | | | |
| Standard Backlash | Arc-min | 50/120 | 0.33 | 0.28 | 0.28 | 0.23 |
| | Arc-sec | 50/120 | 20 | 17 | 17 | 14 |
| Max Tilting moment at flange face | Kgf*m / Nm | 50/120 | 5.13/50.27 | 6.71/65.75 | 13.7/134.26 | 27.48/269.3 |
| Maximum radial load | Kgf/N | 50/120 | 241/2361 | 268/2626 | 442/4331 | 687/6732 |
| Maximum axial load | Kgf/N | 50/120 | 530/2361 | 590/2626 | 973/4331 | 1513/6732 |
| Rated Operation Life | hr | 50/120 | 10,000 At permissible input speed and nominal output torque. | | | |
| Operating Temperature | °C | 50/120 | -10 °C to 40 °C (ambient) / 90 °C (case maximum temp.) | | | |
| Sound Level | dB | 50/120 | 52 | 53 | 55 | 60 |
| Lubrication | - | 50/120 | 4B No.2 | | | |
| Ingress Protection Class | IP | 50/120 | IP54 | | | |
| Gearhead Inertia | ($1 \times 10^{-4} \text{kgm}^2$) | 50/120 | 0.079 | 0.193 | 0.413 | 1.69 |
| | ($1 \times 10^{-5} \text{kgm}^2$) | 50/120 | 0.081 | 0.197 | 0.421 | 1.72 |
| Weight | kg | 50/120 | 0.8 | 1.3 | 2 | 3.5 |
| No Load Running Torque | Kgf*m/Nm | 50/120 | 0.9 / 0.09 | 2/0.2 | 3.1 / 0.31 | 5.7/0.56 |

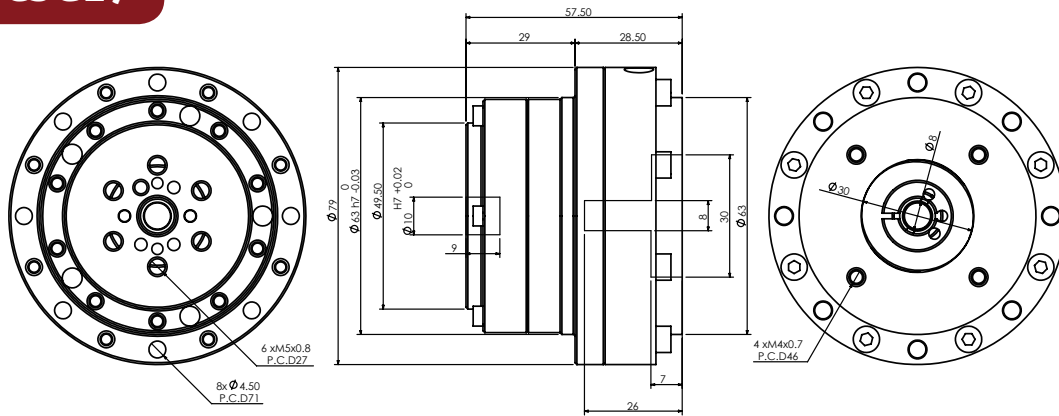
» Permissible axial load or permissible radial load is the value that satisfies the reducer life when either a pure radial load or an axial load is applied to the flange face. (When radial load is $L_r + R = 0 \text{mm}$, and axial load is $L_a = 0 \text{mm}$)

» We modify our standard gearboxes for customer requirements. Please inquire.

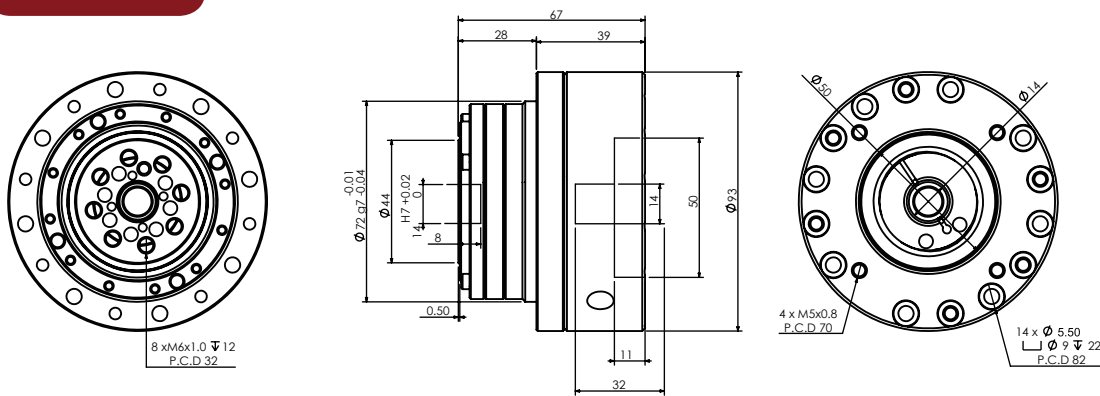


Mechanical dimension

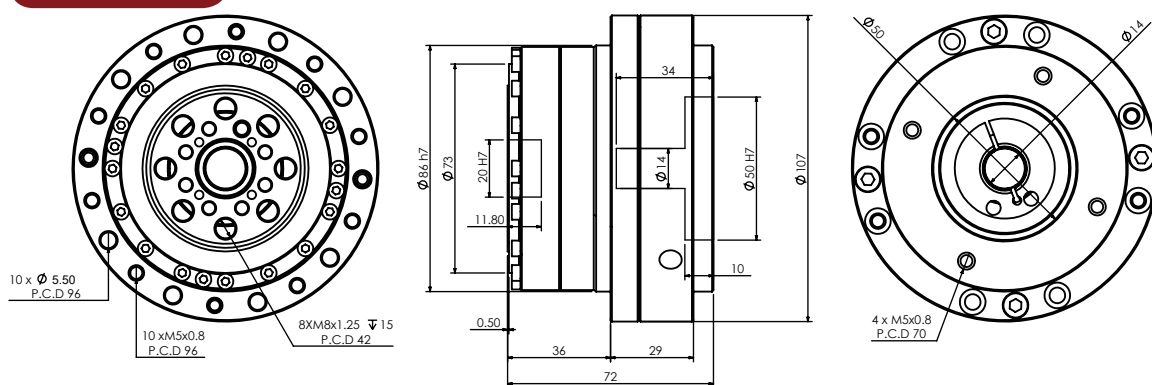
SCSG17



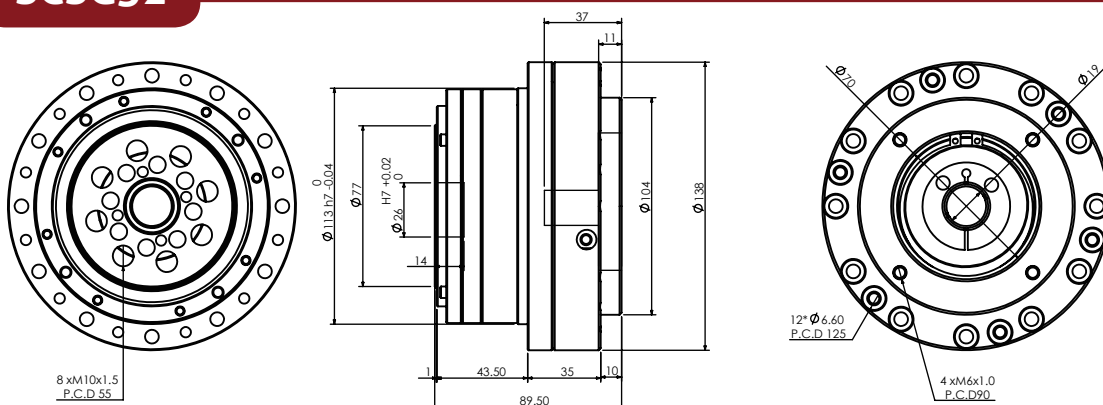
SCSG20



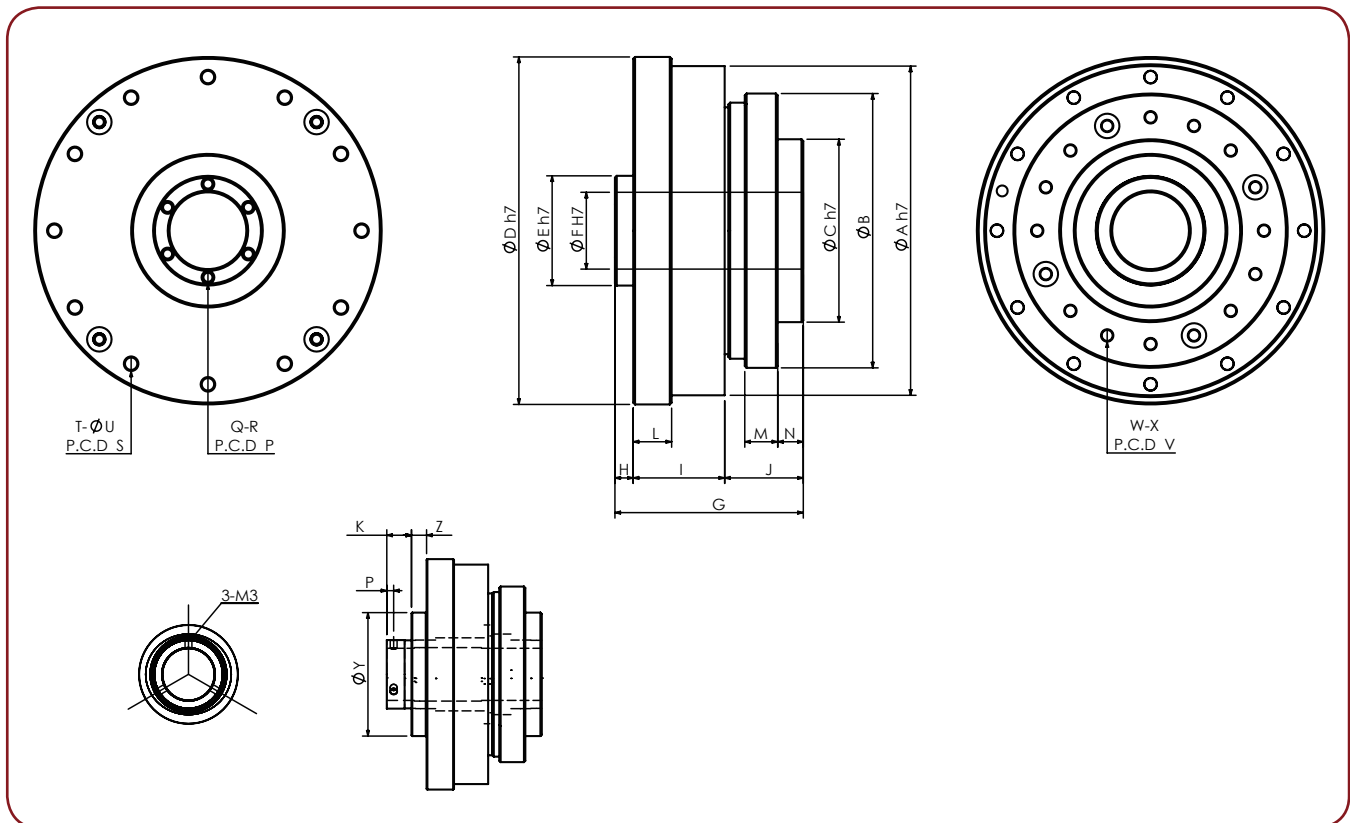
SCSG25



SCSG32

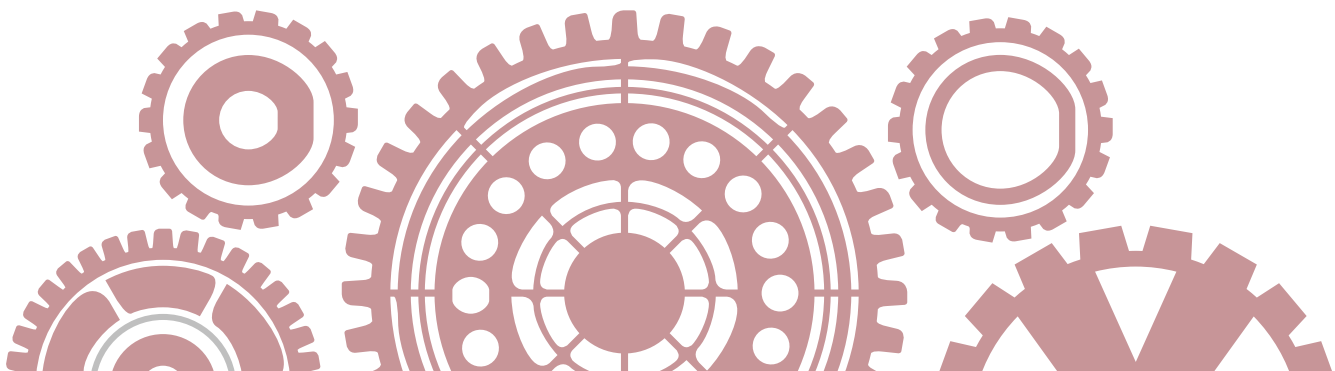


SSHG Series-Harmonic Gearbox With Hollow Shaft Ends



Feature

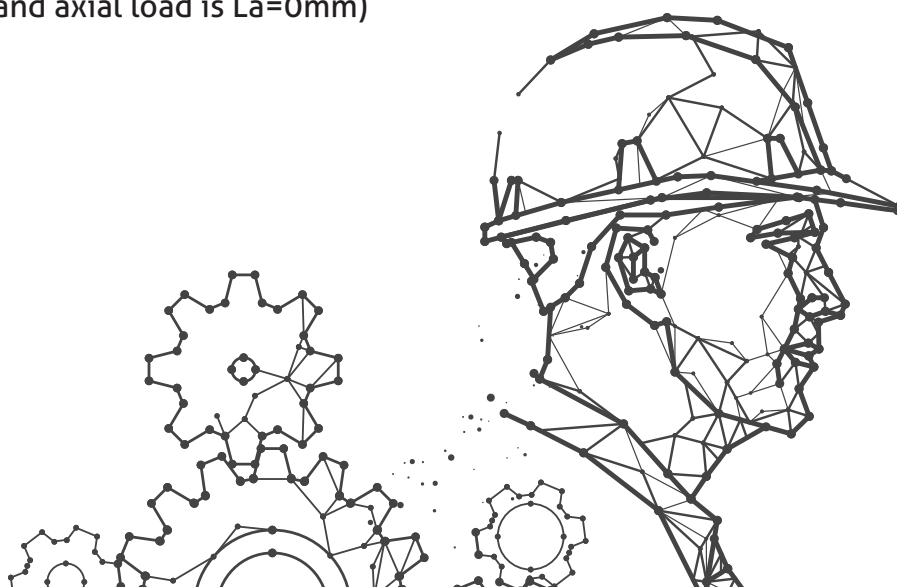
- » Diverse Appearance; suitable for robot arm. Short axial dimension.
- » High rigidity for stable precision work. More compact and higher accurate.
- » Applied in robot industry, especially for multi-axis Robot joints.
- » Hollow Shaft.



Specification Chart

| Performance | Unit | Ratio | SSHG17 | SSHG20 | SSHG25 | SSHG32 |
|-----------------------------------|-------------------------------------|--------|--|--------------|-------------|-------------|
| Nominal Output Torque | kgf*m/Nm | 50 | 2.1/20.58 | 3.3/32.34 | 5.2/50.96 | 10/98 |
| | | 80 | 2.9/28.42 | 4.4/43.5 | 8.4/82.32 | 15.5/152.5 |
| | | 100 | 3.1/30.5 | 5.3/51.94 | 8.8/86.5 | 18/176.4 |
| | | 120 | 3.2/31.36 | 5.3/51.94 | 8.8/86.5 | 18/176.4 |
| Maximum Acceleration Torque | kgf*m/Nm | 50/120 | 3 times nominal output torque | | | |
| Emergency Stop Torque | kgf*m/Nm | 50 | 9/91 | 13/127 | 25/242 | 51/497 |
| | | 80 | 12/113 | 17/165 | 34/332 | 75/738 |
| | | 100 | 15/143 | 20/191 | 38/369 | 86/841 |
| | | 120 | 11/112 | 20/191 | 40/395 | 91/892 |
| Permissible Input Speed | rpm | 50/120 | 3,500 | | | |
| Standard Backlash | Arc-min | 50/120 | 0.33 | 0.28 | 0.28 | 0.23 |
| | Arc-sec | 50/120 | 20 | 17 | 17 | 14 |
| Max Tilting moment-at flange face | kgf*m / Nm | 50/120 | 9.59/93.98 | 24.04/235.59 | 41.19/403.6 | 67.01/656.6 |
| Maximum Radial Force | kgf/N | 50/120 | 320/3136 | 687/6732 | 969/9496 | 1207/11828 |
| Maximum Axial Force | kgf/N | 50/120 | 160/1568 | 343.5/3366 | 484.5/4748 | 603.5/5914 |
| Rated Operation Life | hr | 50/120 | 10,000 At permissible input speed and nominal output torque. | | | |
| Operating Temperature | °C | 50/120 | -10 °C to 40 °C (ambient) / 90 °C (case maximum temp.) | | | |
| Sound Level | dB | 50/120 | 52 | 53 | 55 | 60 |
| Lubrication | - | 50/120 | 4B No.2 | | | |
| Ingress Protection Class | IP | 50/120 | IP54 | | | |
| Gearhead Inertia | ($1 \times 10^{-4} \text{kgm}^2$) | 50/120 | 0.054 | 0.09 | 0.282 | 1.09 |
| | ($1 \times 10^{-5} \text{kgm}^2$) | 50/120 | 0.055 | 0.092 | 0.288 | 1.11 |
| Weight | kg | 50/120 | 1 | 1.38 | 2.1 | 4.5 |
| No Load Running Torque | kgf*m/Nm | 50/120 | 2.7 / 0.26 | 4.7/0.46 | 8 / 0.79 | 16/1.58 |

- » For 1000 Times max during life of gearhead At permissible input speed and Continuous Output Torque At input speed of 1000 rpm Efficiency = 85% at permissible input speed and full load
- » Permissible axial load or permissible radial load is the value that satisfies the reducer life when either a pure radial load or an axial load is applied to the flange face. (When radial load is $L_r + R = 0 \text{mm}$, and axial load is $L_a = 0 \text{mm}$)



SMD Right Angle Gearbox

4 Reasons to Increase 50% Production



1

EXCLUSIVE PRODUCT,
BACKLASH 1 ACR-MIN



2

INCREASES MACHINE
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3

LOW VIBRATION



4

INCREASE PRODUCTION
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