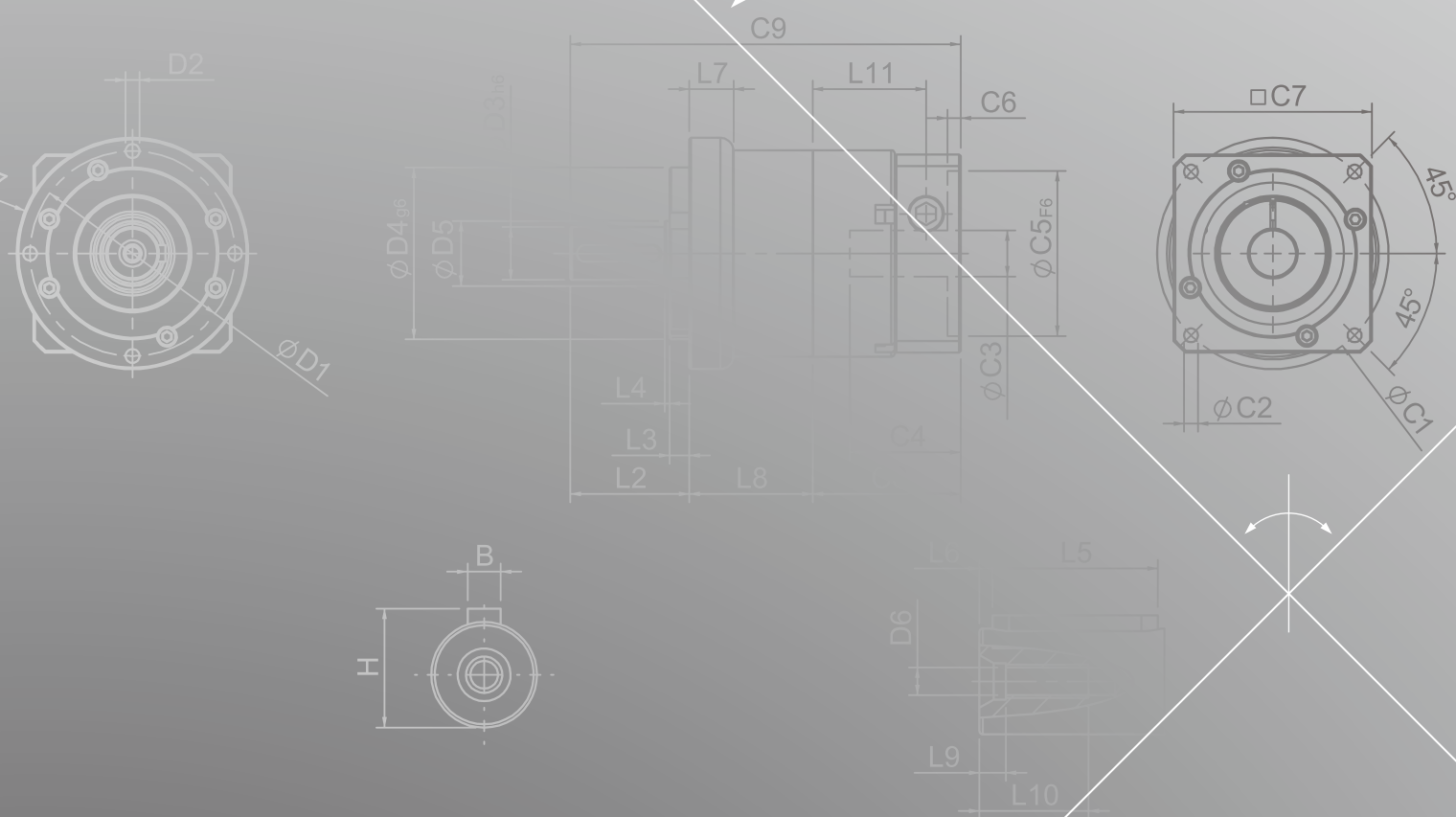
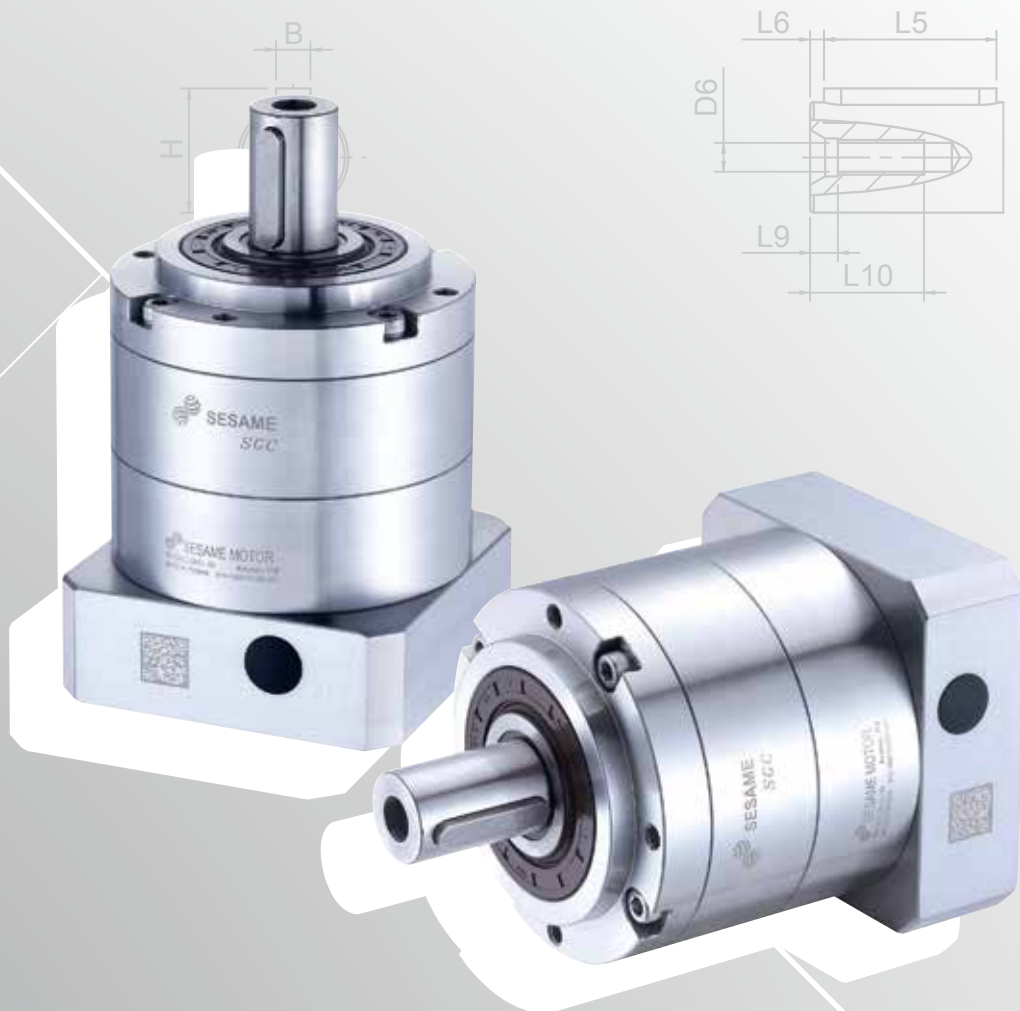
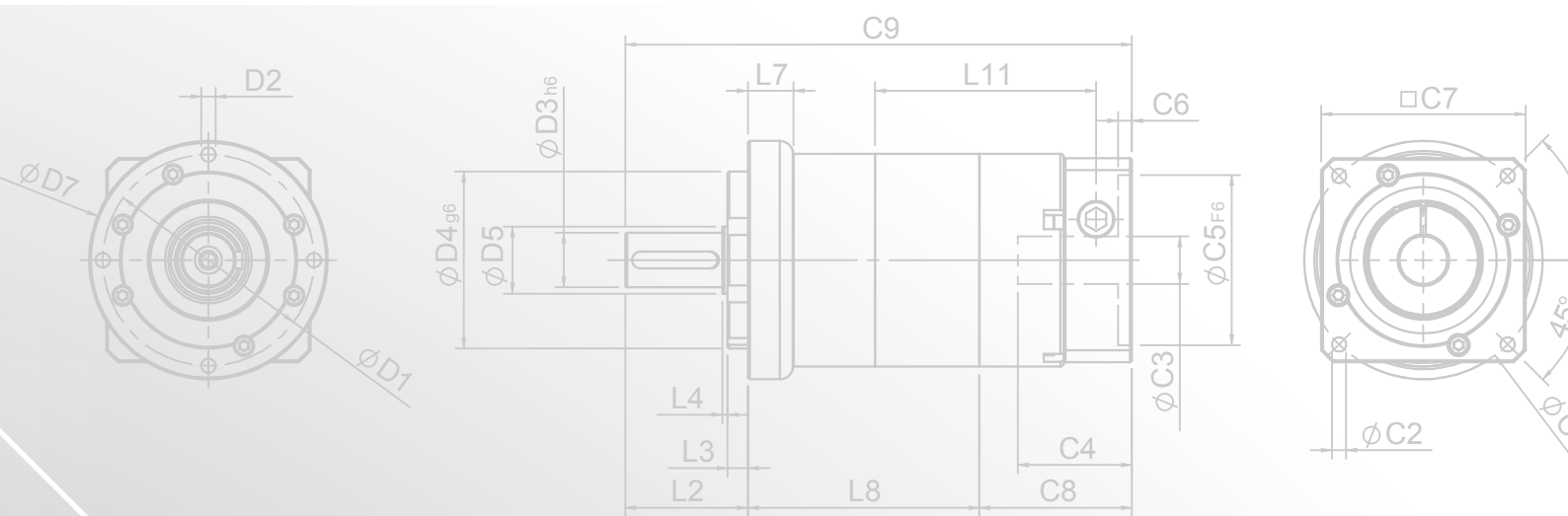
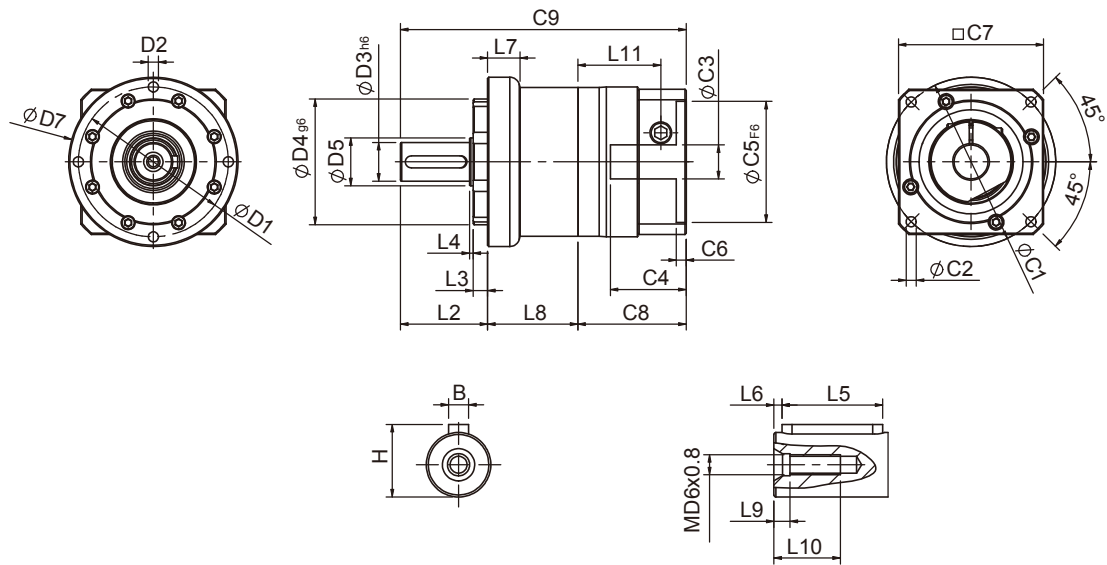


# ***SGC SERIES***





## SGC Single Stage Dimensions



## Specifications

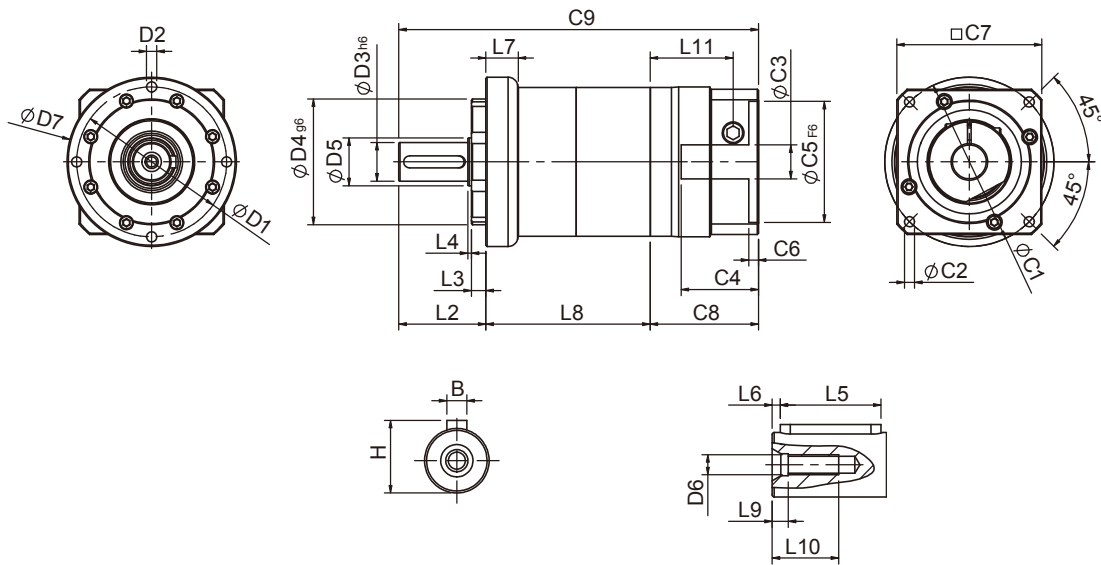
Unit:mm

| Dimensions                    | SGC50 | SGC70             | SGC90                     |
|-------------------------------|-------|-------------------|---------------------------|
| D1                            | -     | 62                | 80                        |
| D2                            | -     | M5x0.8P           | M6x1.0P                   |
| D3 <sub>h6</sub>              | -     | 16                | 22                        |
| D4 <sub>g6</sub>              | -     | 52                | 68                        |
| D5                            | -     | 20                | 35                        |
| D6                            | -     | M5x0.8P           | M8x1.25P                  |
| D7                            | -     | 70                | 90                        |
| L2                            | -     | 36                | 46                        |
| L3                            | -     | 6                 | 7                         |
| L4                            | -     | 1.5               | 2.5                       |
| L5                            | -     | 25                | 32                        |
| L6                            | -     | 2                 | 3                         |
| L7                            | -     | 13.4              | 14.1                      |
| L8                            | -     | 37.3              | 43.8                      |
| L9                            | -     | 4                 | 4.5                       |
| L10                           | -     | 16.5              | 20.5                      |
| L11                           | -     | 34.3              | 41.5                      |
| C1 <sup>2</sup>               | -     | 70                | 90                        |
| C2 <sup>2</sup>               | -     | M5x0.8P           | M6x1.0P                   |
| C3 <sup>2</sup>               | -     | $\leq 14/\leq 19$ | $\leq 19/\leq 24/\leq 28$ |
| C4 <sup>2</sup>               | -     | 33.5              | 41                        |
| C5 <sup>2</sup> <sub>F6</sub> | -     | 50                | 70                        |
| C6 <sup>2</sup>               | -     | 4                 | 6                         |
| C7 <sup>2</sup>               | -     | 60                | 90                        |
| C8 <sup>2</sup>               | -     | 44.8              | 55.8                      |
| C9 <sup>2</sup>               | -     | 118.1             | 145.6                     |
| B                             | -     | 5                 | 6                         |
| H                             | -     | 18                | 24.5                      |

★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

## SGC Double Stage Dimensions



## Specifications

Unit:mm

| Dimensions                    | SGC50 | SGC70   | SGC90       |
|-------------------------------|-------|---------|-------------|
| D1                            | -     | 62      | 80          |
| D2                            | -     | M5x0.8P | M6x1.0P     |
| D3 <sub>h6</sub>              | -     | 16      | 22          |
| D4 <sub>g6</sub>              | -     | 52      | 68          |
| D5                            | -     | 20      | 35          |
| D6                            | -     | M5x0.8P | M8x1.25P    |
| D7                            | -     | 70      | 90          |
| L2                            | -     | 36      | 46          |
| L3                            | -     | 6       | 7           |
| L4                            | -     | 1.5     | 2.5         |
| L5                            | -     | 25      | 32          |
| L6                            | -     | 2       | 3           |
| L7                            | -     | 13.4    | 14.1        |
| L8                            | -     | 67.9    | 84.7        |
| L9                            | -     | 4       | 4.5         |
| L10                           | -     | 16.5    | 20.5        |
| L11                           | -     | 34.3    | 41.5        |
| C1 <sup>2</sup>               | -     | 70      | 90          |
| C2 <sup>2</sup>               | -     | M5x0.8P | M6x1.0P     |
| C3 <sup>2</sup>               | -     | ≤14/≤19 | ≤19/≤24/≤28 |
| C4 <sup>2</sup>               | -     | 33.5    | 41          |
| C5 <sup>2</sup> <sub>F6</sub> | -     | 50      | 70          |
| C6 <sup>2</sup>               | -     | 4       | 6           |
| C7 <sup>2</sup>               | -     | 60      | 90          |
| C8 <sup>2</sup>               | -     | 44.8    | 55.8        |
| C9 <sup>2</sup>               | -     | 148.7   | 186.5       |
| B                             | -     | 5       | 6           |
| H                             | -     | 18      | 24.5        |

★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

## SGC Specifications Table

| Specifications                                 |               | Stage                                                                                                         | Ratio  | SGC-50                                                | SGC-70                      | SGC-90                       | SGC-120       |
|------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------|-----------------------------|------------------------------|---------------|
| Nominal Output Torque T <sub>2N</sub>          | N · m         | 1                                                                                                             | 3      | 9                                                     | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 4      | 10                                                    | 32                          | 80                           | 240           |
|                                                |               |                                                                                                               | 5      | 11                                                    | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 7      | 10                                                    | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 9      | 8                                                     | 23                          | 75                           | 210           |
|                                                |               |                                                                                                               | 10     | 8                                                     | 21                          | 65                           | 190           |
|                                                |               | Stage                                                                                                         | Ratio  | SGC-50                                                | SGC-70(T)                   | SGC-90(T)                    | SGC-120T      |
|                                                |               | 2                                                                                                             | 15     | 11                                                    | 34                          | 90                           | 250           |
|                                                |               |                                                                                                               | 20     | 10                                                    | 32                          | 80                           | 240           |
|                                                |               |                                                                                                               | 25     | 11                                                    | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 35     | 11                                                    | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 45     | 11                                                    | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 49     | 10                                                    | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 63     | 10                                                    | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 81     | 8                                                     | 23                          | 75                           | 210           |
|                                                |               | 100                                                                                                           | 8      | 21                                                    | 65                          | 190                          |               |
| Emergency Stop Torque T <sub>2NOT</sub>        | N · m         | (3.0 times of Nominal Output Torque)<br>( * Max. Output Torque T <sub>2B</sub> =60% of Emergency Stop Torque) |        |                                                       |                             |                              |               |
| Nominal Input Speed n <sub>1N</sub>            | rpm           | 1,2                                                                                                           | 3-100  | 4000                                                  | 4000                        | 3000                         | 2500          |
| Max. Input Speed n <sub>1max</sub>             | rpm           | 1,2                                                                                                           | 3-100  | 6000                                                  | 6000                        | 6000                         | 5000          |
| Standard Backlash P2                           | arcmin        | 1                                                                                                             | 3-10   | ≤ 9                                                   | ≤ 8                         | ≤ 7                          | ≤ 6           |
|                                                |               | 2                                                                                                             | 15-100 | ≤ 12                                                  | ≤ 10                        | ≤ 9                          | ≤ 8           |
| Torsional Rigidity                             | N · m /arcmin | 1,2                                                                                                           | 3-100  | 1.5                                                   | 4.0                         | 8.5                          | 17            |
| Max. Radial Load F <sub>2rB</sub> <sup>1</sup> | N             | 1,2                                                                                                           | 3-100  | 760                                                   | 1250                        | 2030                         | 4200          |
| Max. Axial Load F <sub>2aB</sub> <sup>1</sup>  | N             | 1,2                                                                                                           | 3-100  | 410                                                   | 700                         | 1200                         | 2600          |
| Operating Temp.                                | °C            | 1,2                                                                                                           | 3-100  | -10℃ ~ +90℃                                           |                             |                              |               |
| Service Life                                   | hr            | 1,2                                                                                                           | 3-100  | 20,000 (10,000 Continuous operation)                  |                             |                              |               |
| Efficiency                                     | %             | 1                                                                                                             | 3-10   | ≥ 95%                                                 |                             |                              |               |
|                                                |               | 2                                                                                                             | 15-100 | ≥ 90%                                                 |                             |                              |               |
| Weight                                         | kg            | 1                                                                                                             | 3-10   | 0.9                                                   | 1.9                         | 4.8                          | 11.5          |
|                                                |               | 2                                                                                                             | 15-100 | 1.1                                                   | 2.4(2.2)                    | 6.5(5.4)                     | 13.5          |
| Mounting Position                              | -             | 1,2                                                                                                           | 3-100  | Any Direction                                         |                             |                              |               |
| Noise Level <sup>2</sup>                       | dBA/1m        | 1,2                                                                                                           | 3-100  | 61                                                    | 63                          | 66                           | 67            |
| Protection Class                               | -             | 1,2                                                                                                           | 3-100  | IP65 (Optional : IP67)                                |                             |                              |               |
| Lubrication                                    | -             | 1,2                                                                                                           | 3-100  | Synthetic Lubricant<br>(Optional: Food Grade Grease ) |                             |                              |               |
| Inertia (J1)                                   |               |                                                                                                               |        |                                                       |                             |                              |               |
| Stage                                          | Ratio         | unit                                                                                                          |        | SGC-50(ψ8)                                            | SGC-70(ψ14)                 | SGC-90(ψ19)                  | SGC-120(ψ24)  |
| 1                                              | 3             | Kg · cm <sup>2</sup>                                                                                          |        | 0.04                                                  | 0.23                        | 0.77                         | 2.30          |
|                                                | 4             |                                                                                                               |        | 0.03                                                  | 0.21                        | 0.67                         | 1.92          |
|                                                | 5             |                                                                                                               |        | 0.03                                                  | 0.21                        | 0.61                         | 1.71          |
|                                                | 7             |                                                                                                               |        | 0.03                                                  | 0.21                        | 0.60                         | 1.65          |
|                                                | 9/10          |                                                                                                               |        | 0.03                                                  | 0.21                        | 0.60                         | 1.63          |
| Stage                                          | Ratio         |                                                                                                               |        | SGC-50(ψ8)                                            | SGC-70(ψ14)/<br>SGC-70T(ψ8) | SGC-90(ψ19)/<br>SGC-90T(ψ14) | SGC-120T(ψ19) |
| 2                                              | 15/20/25      |                                                                                                               |        | 0.03                                                  | 0.21(0.03)                  | 0.61(0.21)                   | 0.61          |
|                                                | 35/49         |                                                                                                               |        | 0.03                                                  | 0.21(0.03)                  | 0.60(0.21)                   | 0.60          |
|                                                | 45/63/81/100  |                                                                                                               |        | 0.03                                                  | 0.21(0.03)                  | 0.60(0.21)                   | 0.60          |

\* 1. Applied to the output shaft center at 100 rpm.

\* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

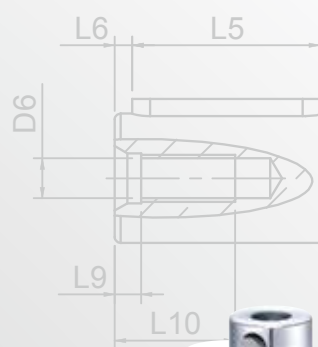
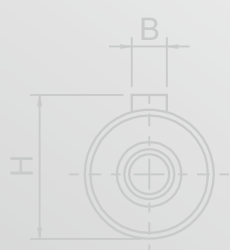
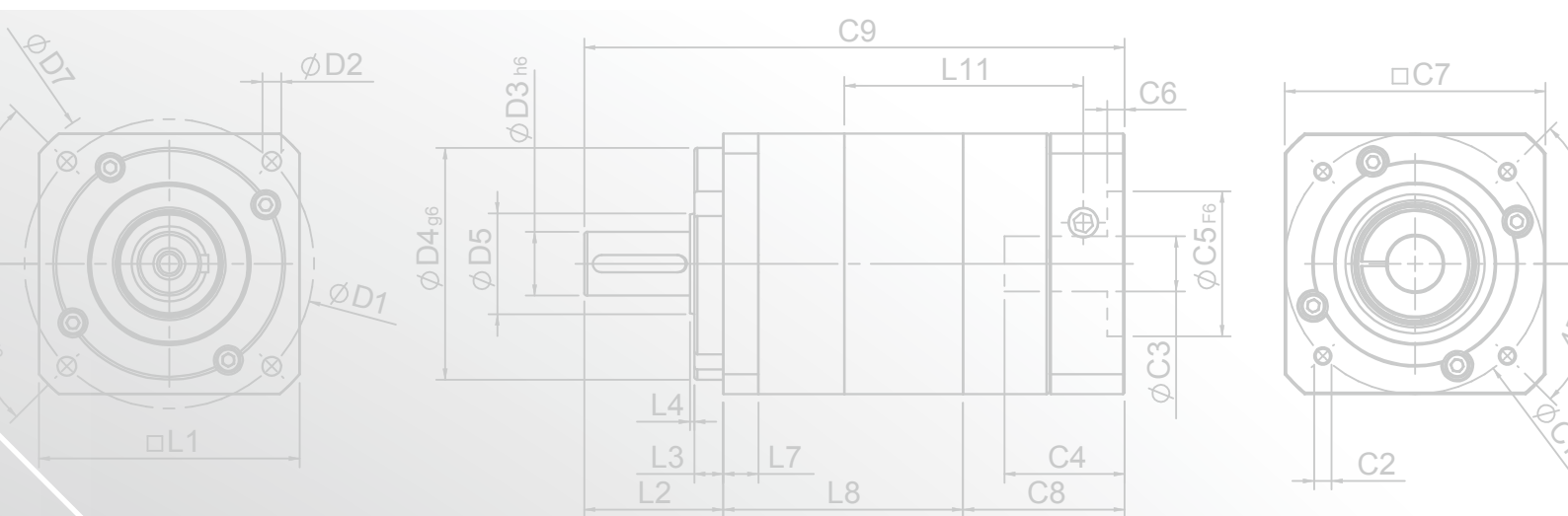
※ The above figures/specifications are subject to change without prior notice.

Products due to human error, natural disasters or other factors lead to poor or damaged, will not be covered under warranty.

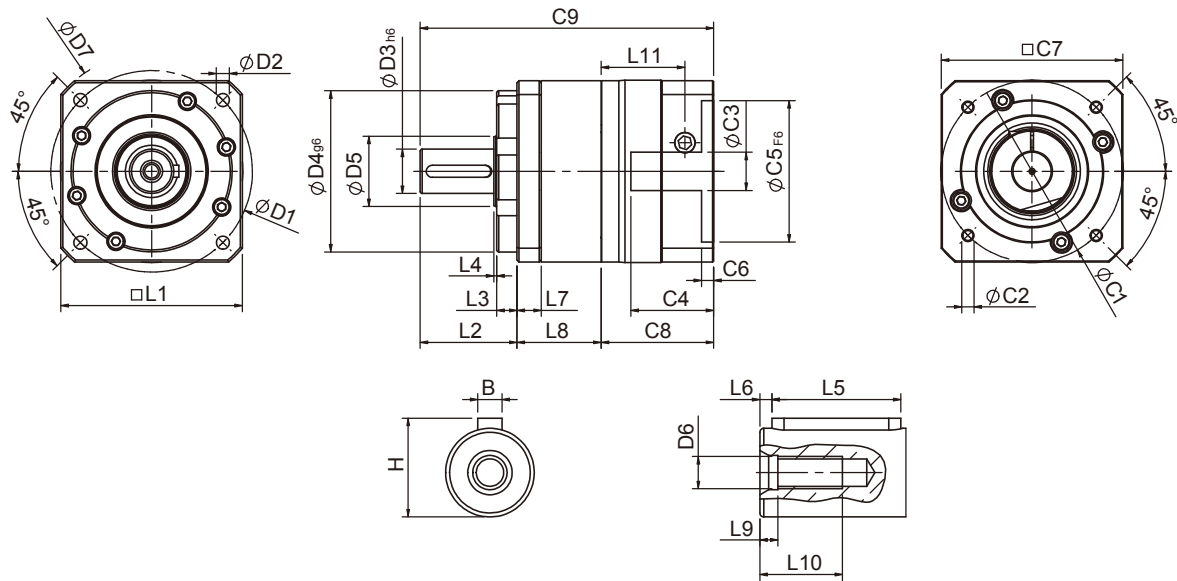
# PLANETARY GEARHEADS







## SGE Single Stage Dimensions



## Specifications

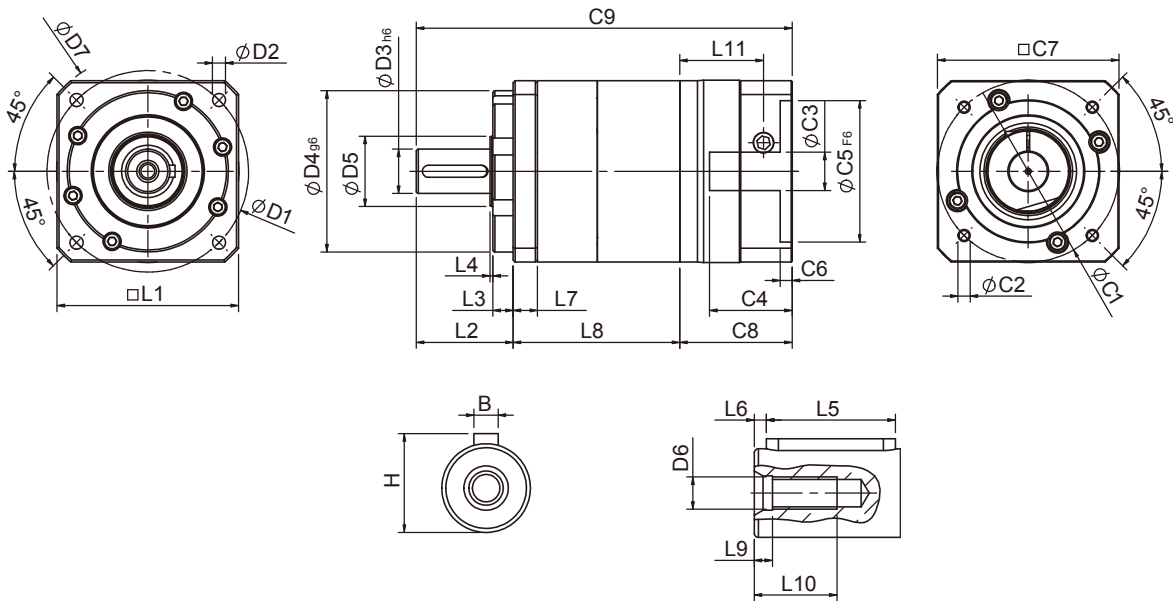
Unit:mm

| Dimensions                    | SGE42 | SGE60   | SGE90       |
|-------------------------------|-------|---------|-------------|
| D1                            | -     | 70      | 100         |
| D2                            | -     | 5.5     | 6.5         |
| D3 <sub>h6</sub>              | -     | 16      | 22          |
| D4 <sub>g6</sub>              | -     | 50      | 80          |
| D5                            | -     | 20      | 35          |
| D6                            | -     | M5x0.8P | M8x1.25P    |
| D7                            | -     | 80      | 118         |
| L1                            | -     | 62.5    | 90          |
| L2                            | -     | 37      | 48          |
| L3                            | -     | 7       | 10          |
| L4                            | -     | 1.5     | 1.5         |
| L5                            | -     | 25      | 32          |
| L6                            | -     | 2       | 3           |
| L7                            | -     | 10      | 12.1        |
| L8                            | -     | 36.3    | 41.8        |
| L9                            | -     | 4       | 4.5         |
| L10                           | -     | 16.5    | 20.5        |
| L11                           | -     | 34.3    | 41.5        |
| C1 <sup>2</sup>               | -     | 70      | 90          |
| C2 <sup>2</sup>               | -     | M5x0.8P | M6x1.0P     |
| C3 <sup>2</sup>               | -     | ≤14/≤19 | ≤19/≤24/≤28 |
| C4 <sup>2</sup>               | -     | 33.5    | 41          |
| C5 <sup>2</sup> <sub>F6</sub> | -     | 50      | 70          |
| C6 <sup>2</sup>               | -     | 4       | 6           |
| C7 <sup>2</sup>               | -     | 60      | 90          |
| C8 <sup>2</sup>               | -     | 44.8    | 55.8        |
| C9 <sup>2</sup>               | -     | 118.1   | 145.6       |
| B                             | -     | 5       | 6           |
| H                             | -     | 18      | 24.5        |

★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

## SGE Double Stage Dimensions



## Specifications

Unit:mm

| Dimensions                    | SGE42 | SGE60   | SGE90       |
|-------------------------------|-------|---------|-------------|
| D1                            | -     | 70      | 100         |
| D2                            | -     | 5.5     | 6.5         |
| D3 <sub>H6</sub>              | -     | 16      | 22          |
| D4 <sub>g6</sub>              | -     | 50      | 80          |
| D5                            | -     | 20      | 35          |
| D6                            | -     | M5x0.8P | M8x1.25P    |
| D7                            | -     | 80      | 118         |
| L1                            | -     | 62.5    | 90          |
| L2                            | -     | 37      | 48          |
| L3                            | -     | 7       | 10          |
| L4                            | -     | 1.5     | 1.5         |
| L5                            | -     | 25      | 32          |
| L6                            | -     | 2       | 3           |
| L7                            | -     | 10      | 12.1        |
| L8                            | -     | 66.9    | 82.7        |
| L9                            | -     | 4       | 4.5         |
| L10                           | -     | 16.5    | 20.5        |
| L11                           | -     | 34.3    | 41.5        |
| C1 <sup>2</sup>               | -     | 70      | 90          |
| C2 <sup>2</sup>               | -     | M5x0.8P | M6x1.0P     |
| C3 <sup>2</sup>               | -     | ≤14/≤19 | ≤19/≤24/≤28 |
| C4 <sup>2</sup>               | -     | 33.5    | 41          |
| C5 <sup>2</sup> <sub>F6</sub> | -     | 50      | 70          |
| C6 <sup>2</sup>               | -     | 4       | 6           |
| C7 <sup>2</sup>               | -     | 60      | 90          |
| C8 <sup>2</sup>               | -     | 44.8    | 55.8        |
| C9 <sup>2</sup>               | -     | 148.7   | 186.5       |
| B                             | -     | 5       | 6           |
| H                             | -     | 18      | 24.5        |

★ C1~C9 are motor specific dimensions (metric std shown). Size may vary according to motor flange.

★ Specification subject to change without notice.

## SGE Specifications Table

| Specifications                                 |               | Stage                                                                                                         | Ratio  | SGE-42                                               | SGE-60                      | SGE-90                       | SGE-115       |
|------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------------|-----------------------------|------------------------------|---------------|
| Nominal Output Torque T <sub>2N</sub>          | N · m         | 1                                                                                                             | 3      | 9                                                    | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 4      | 10                                                   | 32                          | 80                           | 240           |
|                                                |               |                                                                                                               | 5      | 11                                                   | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 7      | 10                                                   | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 9      | 8                                                    | 23                          | 75                           | 210           |
|                                                |               |                                                                                                               | 10     | 8                                                    | 21                          | 65                           | 190           |
|                                                |               | Stage                                                                                                         | Ratio  | SGE-42                                               | SGE-60(T)                   | SGE-90(T)                    | SGE-115T      |
|                                                |               | 2                                                                                                             | 15     | 11                                                   | 34                          | 90                           | 250           |
|                                                |               |                                                                                                               | 20     | 10                                                   | 32                          | 80                           | 240           |
|                                                |               |                                                                                                               | 25     | 11                                                   | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 35     | 11                                                   | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 45     | 11                                                   | 35                          | 95                           | 270           |
|                                                |               |                                                                                                               | 49     | 10                                                   | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 63     | 10                                                   | 28                          | 85                           | 220           |
|                                                |               |                                                                                                               | 81     | 8                                                    | 23                          | 75                           | 210           |
|                                                |               | 100                                                                                                           | 8      | 21                                                   | 65                          | 190                          |               |
| Emergency Stop Torque T <sub>2NOT</sub>        | N · m         | (3.0 times of Nominal Output Torque)<br>( * Max. Output Torque T <sub>2B</sub> =60% of Emergency Stop Torque) |        |                                                      |                             |                              |               |
| Nominal Input Speed n <sub>1N</sub>            | rpm           | 1,2                                                                                                           | 3-100  | 4000                                                 | 4000                        | 3000                         | 2500          |
| Max. Input Speed n <sub>1max</sub>             | rpm           | 1,2                                                                                                           | 3-100  | 6000                                                 | 6000                        | 6000                         | 5000          |
| Standard Backlash P2                           | arcmin        | 1                                                                                                             | 3-10   | ≤ 9                                                  | ≤ 8                         | ≤ 7                          | ≤ 6           |
|                                                |               | 2                                                                                                             | 15-100 | ≤ 12                                                 | ≤ 10                        | ≤ 9                          | ≤ 8           |
| Torsional Rigidity                             | N · m /arcmin | 1,2                                                                                                           | 3-100  | 1.5                                                  | 4.0                         | 8.5                          | 17            |
| Max. Radial Load F <sub>2rB</sub> <sup>1</sup> | N             | 1,2                                                                                                           | 3-100  | 760                                                  | 1250                        | 2030                         | 4200          |
| Max. Axial Load F <sub>2aB</sub> <sup>1</sup>  | N             | 1,2                                                                                                           | 3-100  | 410                                                  | 700                         | 1200                         | 2600          |
| Operating Temp.                                | °C            | 1,2                                                                                                           | 3-100  | -10 °C ~ +90 °C                                      |                             |                              |               |
| Service Life                                   | hr            | 1,2                                                                                                           | 3-100  | 20,000 (10,000 Continuous operation)                 |                             |                              |               |
| Efficiency                                     | %             | 1                                                                                                             | 3-10   | ≥ 95%                                                |                             |                              |               |
|                                                |               | 2                                                                                                             | 15-100 | ≥ 90%                                                |                             |                              |               |
| Weight                                         | kg            | 1                                                                                                             | 3-10   | 0.9                                                  | 1.9                         | 4.8                          | 11.5          |
|                                                |               | 2                                                                                                             | 15-100 | 1.1                                                  | 2.4(2.2)                    | 6.5(5.4)                     | 13.5          |
| Mounting Position                              | -             | 1,2                                                                                                           | 3-100  | Any Direction                                        |                             |                              |               |
| Noise Level <sup>2</sup>                       | dBA/1m        | 1,2                                                                                                           | 3-100  | 61                                                   | 63                          | 66                           | 67            |
| Protection Class                               | -             | 1,2                                                                                                           | 3-100  | IP65 (Optional : IP67)                               |                             |                              |               |
| Lubrication                                    | -             | 1,2                                                                                                           | 3-100  | Synthetic Lubricant<br>(Optional: Food Grade Grease) |                             |                              |               |
| Inertia (J1)                                   |               |                                                                                                               |        |                                                      |                             |                              |               |
| Stage                                          | Ratio         | unit                                                                                                          |        | SGE-42(ψ8)                                           | SGE-60(ψ14)                 | SGE-90(ψ19)                  | SGE-115(ψ24)  |
| 1                                              | 3             | Kg · cm <sup>2</sup>                                                                                          |        | 0.04                                                 | 0.23                        | 0.77                         | 2.30          |
|                                                | 4             |                                                                                                               |        | 0.03                                                 | 0.21                        | 0.67                         | 1.92          |
|                                                | 5             |                                                                                                               |        | 0.03                                                 | 0.21                        | 0.61                         | 1.71          |
|                                                | 7             |                                                                                                               |        | 0.03                                                 | 0.21                        | 0.60                         | 1.65          |
|                                                | 9/10          |                                                                                                               |        | 0.03                                                 | 0.21                        | 0.60                         | 1.63          |
| Stage                                          | Ratio         |                                                                                                               |        | SGE-42(ψ8)                                           | SGE-60(ψ14)/<br>SGE-60T(ψ8) | SGE-90(ψ19)/<br>SGE-90T(ψ14) | SGE-115T(ψ19) |
| 2                                              | 15/20/25      |                                                                                                               |        | 0.03                                                 | 0.21(0.03)                  | 0.61(0.21)                   | 0.61          |
|                                                | 35/49         |                                                                                                               |        | 0.03                                                 | 0.21(0.03)                  | 0.60(0.21)                   | 0.60          |
|                                                | 45/63/81/100  |                                                                                                               |        | 0.03                                                 | 0.21(0.03)                  | 0.60(0.21)                   | 0.60          |

\* 1. Applied to the output shaft center at 100 rpm.

\* 2. Measured at 3000 rpm with no load. These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at nominal input speed or 3000 rpm (if nominal input speed is higher than 3000 rpm) with no load.

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# PLANETARY GEARHEADS

