



**ZPG/ZDPG/ZRS/AGV SERIES  
HIGH PRECISION PLANETARY GEAR BOX**



Zhongda Leader Realizes Infinite Possibility In Automation Application

# Motor Drivers Micro Motors Precision Reducers



**Headquarters** Ningbo Zhongda Leader Intelligent Transmission Co., Ltd.



**Subsidiary**  
Ningbo Zhongda Chuangyuan Precision Equipment Co., Ltd.



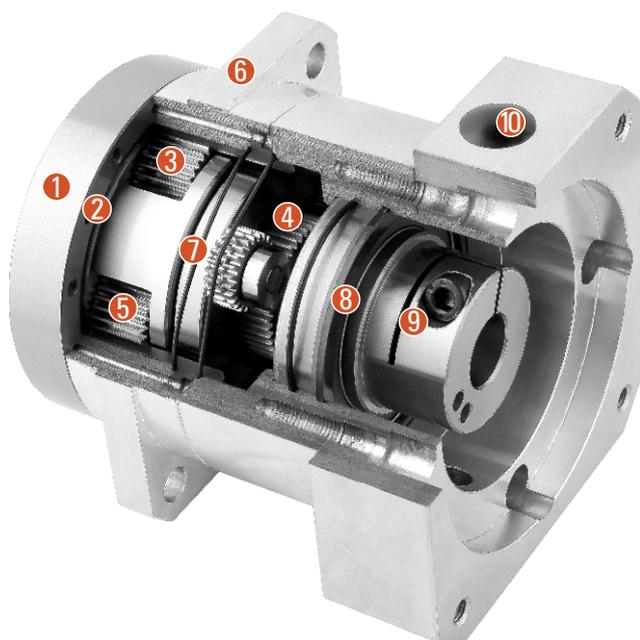
**Subsidiary**  
Foshan Zhongda Leader Drive Technology Co., Ltd.

Source Engineering, established in 1998 has been assisting OEM customers with their motion control needs for over 25 years. Our complete product line of motors, gearmotors, precision gearheads, standard and custom gives us the flexibility to provide a solution for a wide variety of industries and applications. Engineering, sales, technical support, and a stocking warehouse are located at our company headquarters in Ca.

Our Global manufacturing partner Ningbo Zhongda Leader Intelligent Transmission Co., Ltd has 9 branches and subsidiaries with 1800 employees. With their assistance, we can offer high-quality cost-effective products, R&D, special designs, and additional technical support to all our customers nationwide and overseas.

# ZPG/ZDPG SERIES GEAR BOX

## Sectional Drawing



- ① Output shaft
- ② Output shaft front bearing
- ③ Planetary gear
- ④ Sun Gear
- ⑤ Full needle bearing
- ⑥ Front cover
- ⑦ Output shaft rear bearing
- ⑧ Oil seal
- ⑨ Coupling
- ⑩ Rear cover

## Type And Model Number

| ZPG/ZDPG Reducers |          |    |    | Servo Motor |   |      |    |
|-------------------|----------|----|----|-------------|---|------|----|
| 32                | ZPG/ZDPG | 21 | () | (S)         | - | 1000 | T1 |
| ①                 | ②        | ③  | ④  | ⑤           | ⑥ | ⑦    |    |

① Gear head frame size: 20, 32, 50

② Gear head series code: ZPG: High torque type ZDPG: Standard torque type

Gear ratio

③ Single stage: 5

Two stages: 11, 15, 21, 33, 45

④ Backlash

Output load is  $\pm 3\%$  of the rated output torque

| Reducer Type No | Stage | Standard Type | High Precision Type PO |
|-----------------|-------|---------------|------------------------|
| 20ZPG           | 1     | 3分arc-min     | 1分arc-min              |
|                 | 2     | 5分arc-min     | 3分arc-min              |
| 32ZPG           | 1     | 3分arc-min     | 1分arc-min              |
|                 | 2     | 5分arc-min     | 3分arc-min              |
| 50ZPG           | 1     | 3分arc-min     | 1分arc-min              |
|                 | 2     | 5分arc-min     | 3分arc-min              |

Input shaft type

S: Overall Locking (Omission)(Regardless whether the motor with keyway can use it)

⑤ S1: Locking with locking ring (Omission)(Regardless whether the motor with keyway can use it)

S2: Locking with keyway (Input shaft with key)

A: Other type (Please contact with us)

⑥ Applicable servo motor power (W)

⑦ Model of servo motor & input flange

# PRODUCT SPECIFICATIONS

## Reducer Performance Data

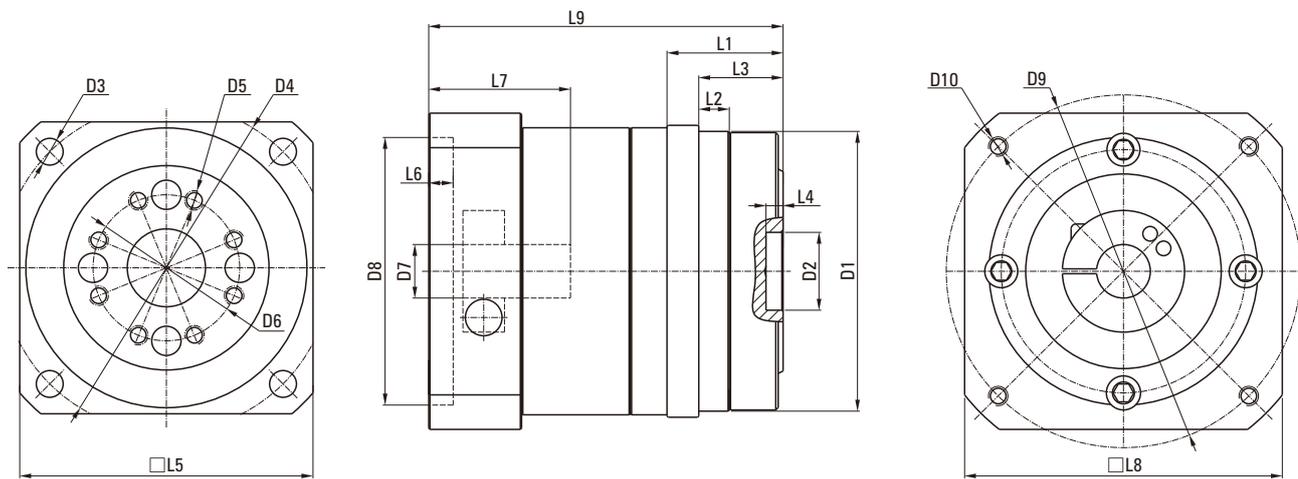
| Specifications               |           | Stage Number | Reduction Ratio             | 20ZPG                | 32ZPG | 50ZPG |
|------------------------------|-----------|--------------|-----------------------------|----------------------|-------|-------|
| Rated output torque $T_{2N}$ | Nm        | 1            | 5                           | 50                   | 150   | 380   |
|                              |           |              | 2                           | 11                   | 59    | 160   |
|                              |           | 15           |                             | 70                   | 220   | 460   |
|                              |           | 21           |                             | 78                   | 240   | 490   |
|                              |           | 33           |                             | 72                   | 200   | 620   |
|                              |           | 45           | 98                          | 280                  | 640   |       |
| Instantaneous maximum torque | Nm        | 1,2          | 2 times rated output torque |                      |       |       |
| Recommended input speed      | rpm       | 1,2          | 5~45                        | 3000                 | 3000  | 2000  |
| Maximum input speed          | rpm       | 1,2          | 5~45                        | 6000                 | 6000  | 4500  |
| Precision back lash          | arcmin    | 1            | 5                           | ≤1                   | ≤1    | ≤1    |
|                              |           | 2            | 11~45                       | ≤3                   | ≤3    | ≤3    |
| Standard back lash           | arcmin    | 1            | 5                           | ≤3                   | ≤3    | ≤3    |
|                              |           | 2            | 11~45                       | ≤5                   | ≤5    | ≤5    |
| Torsional rigidity           | Nm/arcmin | 1,2          | 5~45                        | 0.55                 | 2.2   | 14    |
| Life                         | hr        | 1,2          | 5~45                        | 20000                |       |       |
| Efficiency                   | %         | 1            | 5                           | ≥97                  |       |       |
|                              |           | 2            | 11~45                       | ≥94                  |       |       |
| Weight                       | Kg        | 1            | 5                           | 1.2                  | 3.0   | 10    |
|                              |           | 2            | 11~45                       | 1.5                  | 3.7   | 12    |
| Ambient temperature          | °C        | 1,2          | 11~45                       | -10°C ~ +90°C        |       |       |
| lubrication                  |           | 1,2          | 11~45                       | Lifetime lubrication |       |       |
| Protection grade             |           | 1,2          | 11~45                       | IP65                 |       |       |
| Installation direction       |           | 1,2          | 11~45                       | Any direction        |       |       |
| Noise value                  | dB (A)    | 1,2          | 11~45                       | ≤63                  | ≤65   | ≤72   |
| The moment of inertia        | Nm        | 1            | 5                           | 0.16                 | 0.80  | 4.90  |
|                              |           |              | 2                           | 11                   | 0.17  | 1.00  |
|                              |           | 15           |                             | 0.15                 | 0.74  | 3.50  |
|                              |           | 21           |                             | 0.071                | 0.35  | 1.60  |
|                              |           | 33           |                             | 0.029                | 0.17  | 0.72  |
|                              |           | 45           | 0.022                       | 0.12                 | 0.50  |       |

## Reducer Performance Data

| Specifications               |           | Stage Number | Reduction Ratio             | 20ZDPG               | 32ZDPG | 50ZDPG |
|------------------------------|-----------|--------------|-----------------------------|----------------------|--------|--------|
| Rated output torque $T_{2N}$ | Nm        | 1            | 5                           | 38                   | 120    | 290    |
|                              |           |              | 2                           | 11                   | 46     | 160    |
|                              |           | 15           |                             | 58                   | 170    | 400    |
|                              |           | 21           |                             | 58                   | 190    | 450    |
|                              |           | 33           |                             | 70                   | 200    | 470    |
|                              |           | 45           | 73                          | 240                  | 560    |        |
| Instantaneous maximum torque | Nm        | 1,2          | 2 times rated output torque |                      |        |        |
| Recommended input speed      | rpm       | 1,2          | 5~45                        | 3000                 | 3000   | 2000   |
| Maximum input speed          | rpm       | 1,2          | 5~45                        | 6000                 | 6000   | 4500   |
| Precision back lash          | arcmin    | 1,2          | 5~45                        | ≤1                   | ≤1     | ≤1     |
| Standard back lash           | arcmin    | 1,2          | 5~45                        | ≤3                   | ≤3     | ≤3     |
| Torsional rigidity           | Nm/arcmin | 1,2          | 5~45                        | 0.55                 | 2.2    | 14     |
| Life                         | hr        | 1,2          | 5~45                        | 20000                |        |        |
| Efficiency                   | %         | 1            | 5                           | ≥97                  |        |        |
|                              |           | 2            | 11~45                       | ≥94                  |        |        |
| Weight                       | Kg        | 1            | 5                           | 1.2                  | 3.0    | 10     |
|                              |           | 2            | 11~45                       | 1.5                  | 3.7    | 12     |
| Ambient temperature          | °C        | 1,2          | 11~45                       | -10°C ~ +90°C        |        |        |
| lubrication                  |           | 1,2          | 11~45                       | Lifetime lubrication |        |        |
| Protection grade             |           | 1,2          | 11~45                       | IP65                 |        |        |
| Installation direction       |           | 1,2          | 11~45                       | Any direction        |        |        |
| Noise value                  | dB (A)    | 1,2          | 11~45                       | ≤63                  | ≤65    | ≤72    |
| The moment of inertia        | Nm        | 1            | 5                           | 0.17                 | 0.73   | 4.8    |
|                              |           |              | 2                           | 11                   | 0.15   | 0.78   |
|                              |           | 15           |                             | 0.14                 | 0.62   | 2.9    |
|                              |           | 21           |                             | 0.069                | 0.34   | 1.6    |
|                              |           | 33           |                             | 0.023                | 0.12   | 0.6    |
|                              |           | 45           | 0.022                       | 0.11                 | 0.6    |        |

# ZPG DIMENSIONS (SINGLE STAGE, RATIO I=5, TWO STAGE I=11-45)

## Dimensional Drawing



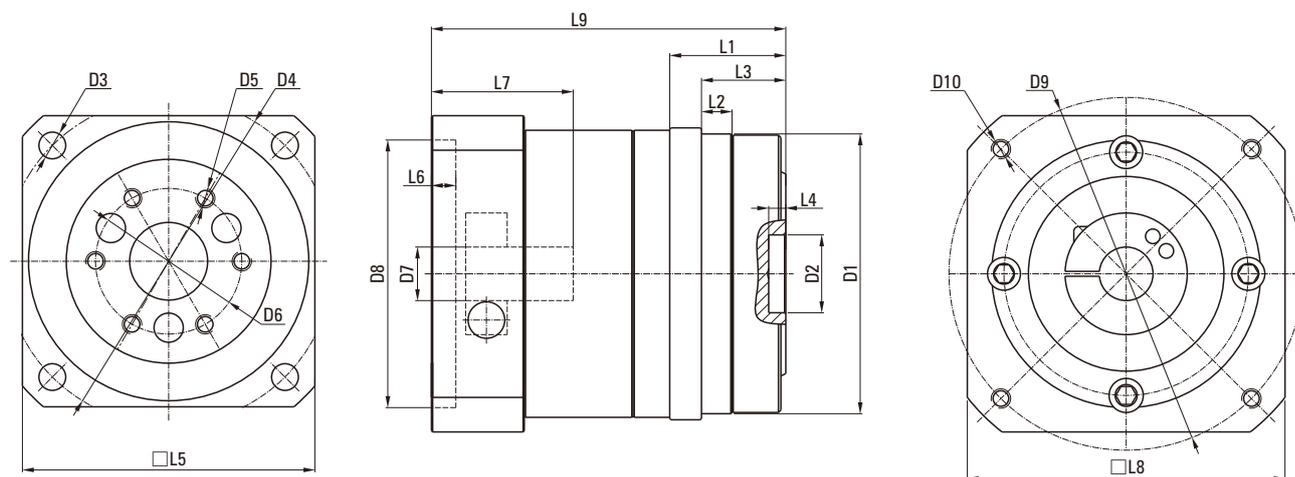
## Dimensional Table

Unit: mm

| Type                                    | 20ZPG   | 32ZPG   | 50ZPG    |
|---|---------|---------|----------|
| D1 Mounting boss                        | Φ85h7   | Φ115h7  | Φ165h7   |
| D2 Install seam                         | Φ24H7   | Φ32H7   | Φ47H7    |
| D3 Flange mounting through hole         | 4-Φ9    | 4-Φ11   | 4-Φ14    |
| D4 Distribution circle of mounting hole | Φ105    | Φ135    | Φ190     |
| D5 Threaded mounting holes              | 8-M6×10 | 8-M8×12 | 8-M12×20 |
| D6 Distribution circle of thread hole   | Φ45     | Φ60     | Φ90      |
| D7 Input coupling hole                  | Φ14~Φ19 | Φ22     | Φ35      |
| D8 Input lip                            | Φ70     | Φ110    | Φ114.3   |
| D9 Distribution circle of threaded hole | Φ90     | Φ145    | Φ200     |
| 4-D10 Gasket threaded hole              | M6×10   | M8×12   | M12×20   |
| L1 Flange face to face length           | 37      | 47.5    | 69       |
| L2 Boss length                          | 8       | 12.5    | 12       |
| L3 Output flange thickness              | 27      | 34.5    | 53       |
| Depth of L4 seam                        | 5       | 7       | 7        |
| L5 Flange width                         | □90     | □120    | □170     |
| L6 Gasket seam depth                    | 5       | 8       | 10       |
| L7 Coupling depth                       | 41      | 58      | 81       |
| L8 Gasket width                         | 100     | 130     | 176      |
| L9 Reducer length                       | 1 stage | 96      | 120      |
|   | 2 stage | 113     | 145      |

# ZDPG DIMENSIONS (SINGLE STAGE, RATIO I=5, TWO STAGE I=11-45)

## Dimensional Drawing



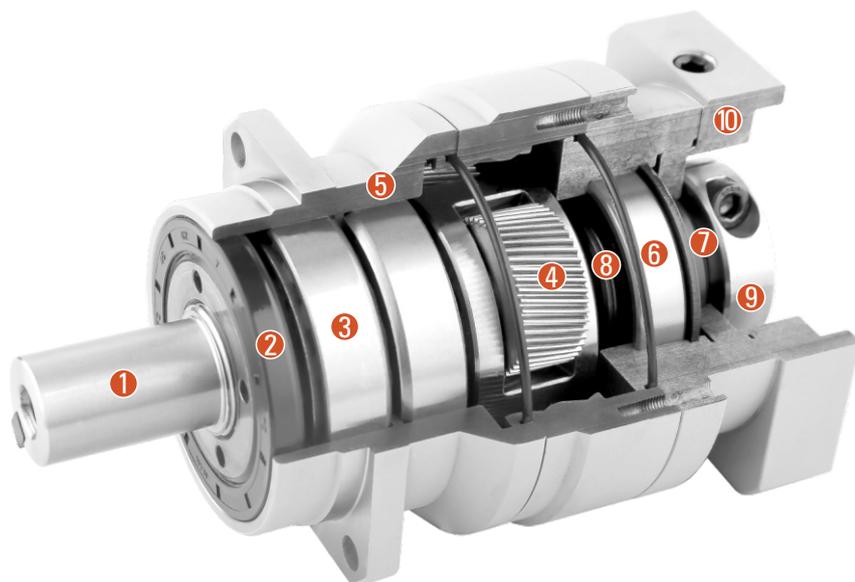
## Dimensional Table

Unit: mm

| Type                                    | 20ZDPG  | 32ZDPG  | 50ZDPG   |
|---|---------|---------|----------|
| D1 Mounting boss                        | Φ85h7   | Φ115h7  | Φ165h7   |
| D2 Install seam                         | Φ24H7   | Φ32H7   | Φ47H7    |
| D3 Flange mounting through hole         | 4-Φ9    | 4-Φ11   | 4-Φ14    |
| D4 Distribution circle of mounting hole | Φ105    | Φ135    | Φ190     |
| D5 Threaded mounting holes              | 6-M6×10 | 6-M8×12 | 14-M8×12 |
| D6 Distribution circle of thread hole   | Φ45     | Φ60     | Φ100     |
| D7 Input coupling hole                  | Φ14~Φ19 | Φ22     | Φ35      |
| D8 Input lip                            | Φ70     | Φ110    | Φ114.3   |
| D9 Distribution circle of threaded hole | Φ90     | Φ145    | Φ200     |
| 4-D10 Gasket threaded hole              | M6×10   | M8×12   | M12×20   |
| L1 Flange face to face length           | 37      | 47.5    | 69       |
| L2 Boss length                          | 8       | 12.5    | 12       |
| L3 Output flange thickness              | 27      | 34.5    | 53       |
| Depth of L4 seam                        | 5       | 7       | 7        |
| L5 Flange width                         | □90     | □120    | □170     |
| L6 Gasket seam depth                    | 5       | 8       | 10       |
| L7 Coupling depth                       | 41      | 58      | 81       |
| L8 Gasket width                         | 100     | 130     | 176      |
| L9 Reducer length                       | 1 stage | 96      | 120      |
|   | 2 stage | 113     | 145      |

# ZRS SERIES GEAR BOX

## Sectional Drawing



- ① Output shaft
- ② Oil seal
- ③ Output shaft bearing
- ④ Planetary gear
- ⑤ Front cover
- ⑥ Coupling bearing
- ⑦ Oil seal
- ⑧ Coupling
- ⑨ Lock ring
- ⑩ Rear cover

## Type And Model Number

| ZRS Reducers | Servo Motor |
|--------------|-------------|
|--------------|-------------|

**060**      **ZRS**      **10**      **( )**      **(S)**      -      **400**      **T1**  
 ①            ②            ③            ④            ⑤            ⑥            ⑦

① Gear head frame size: 060

② Gear head series code: ZRS: Square mounting flange series

Gear ratio

③ Single stage: 3, 4, 5, 6, 7, 8, 9, 10

Two stage: 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100

Amount of backlash, (P07)

④ Standard type P1 (Omission), high precision P0

The load of output shaft is  $\pm 3\%$  of allowable output torque

Input shaft type

S: Overall Locking (Omission) (Regardless whether the motor with keyway can use it)

⑤ S1: Locking with locking ring (Omission) (Regardless whether the motor with keyway can use it)

S2: Locking with keyway (Input shaft with key)

A: Other type (Please contact with us)

⑥ Applicable servo motor power (W)

⑦ Model of servo motor & input flange

# PRODUCT SPECIFICATIONS

## Reducer Performance Data

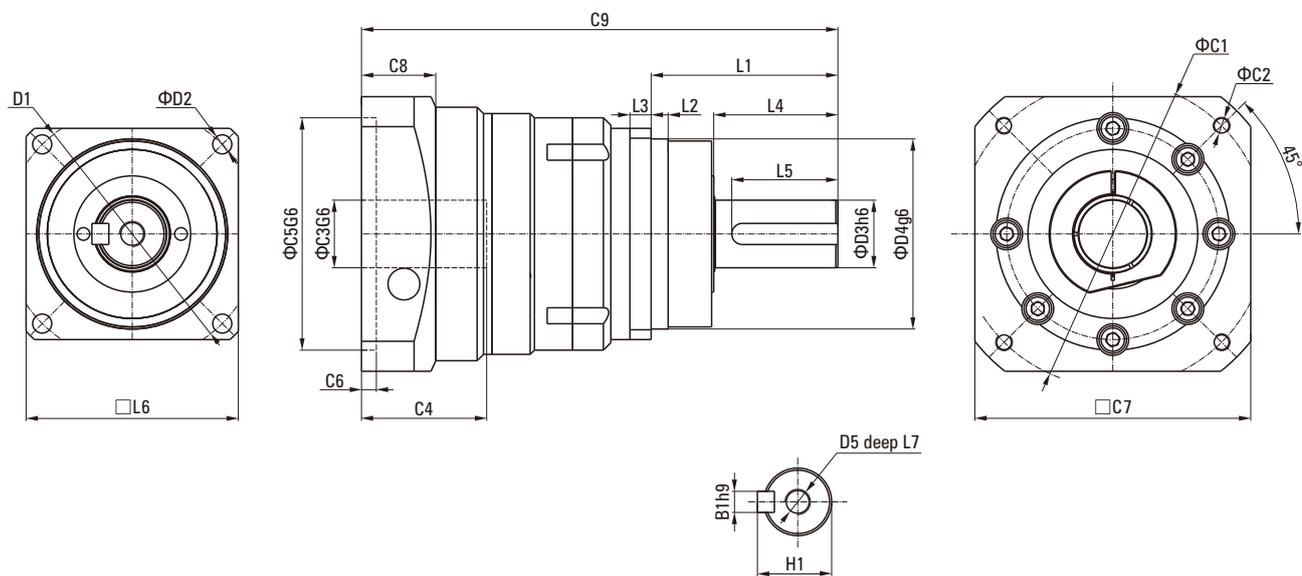
| Specifications               |           | Stage Number | Reduction Ratio | 060ZRS                      | 075ZRS | 100ZRS | 140ZRS |     |
|------------------------------|-----------|--------------|-----------------|-----------------------------|--------|--------|--------|-----|
| Rated output torque $T_{2N}$ | Nm        | 1            | 3               | 55                          | 130    | 208    | 342    |     |
|                              |           |              | 4               | 50                          | 140    | 190    | 542    |     |
|                              |           |              | 5               | 60                          | 160    | 330    | 650    |     |
|                              |           |              | 6               | 55                          | 150    | 310    | 600    |     |
|                              |           |              | 7               | 50                          | 140    | 300    | 550    |     |
|                              |           |              | 8               | 45                          | 120    | 260    | 500    |     |
|                              |           |              | 9               | 40                          | 100    | 230    | 450    |     |
|                              |           |              | 10              | 40                          | 100    | 230    | 450    |     |
|                              |           |              | 2               | 15                          | -      | 130    | 208    | 342 |
|                              |           |              |                 | 20                          | -      | 140    | 290    | 542 |
|                              |           | 25           |                 | -                           | 160    | 330    | 650    |     |
|                              |           | 30           |                 | -                           | 150    | 310    | 600    |     |
|                              |           | 35           |                 | -                           | 140    | 300    | 550    |     |
|                              |           | 40           |                 | -                           | 120    | 260    | 500    |     |
|                              |           | 45           |                 | -                           | 100    | 230    | 450    |     |
|                              |           | 50           |                 | -                           | 160    | 330    | 650    |     |
|                              |           | 60           |                 | -                           | 150    | 310    | 600    |     |
|                              |           | 70           |                 | -                           | 140    | 300    | 550    |     |
|                              |           | 80           | -               | 120                         | 260    | 500    |        |     |
| 90                           | -         | 100          | 230             | 450                         |        |        |        |     |
| 100                          | -         | 100          | 230             | 450                         |        |        |        |     |
| Sudden stop torque           | Nm        | 1,2          | 3~100           | 3 times rated output torque |        |        |        |     |
| Rated input speed            | rpm       | 1,2          | 3~100           | 3000                        | 3000   | 3000   | 2000   |     |
| Maximum input speed          | rpm       | 1,2          | 3~100           | 6000                        | 6000   | 6000   | 4000   |     |
| Precision back lash          | arcmin    | 1            | 3~10            | ≤1                          | ≤1     | ≤1     | ≤1     |     |
|                              |           | 2            | 15~100          | -                           | ≤3     | ≤3     | ≤3     |     |
| Standard back lash           | arcmin    | 1            | 3~10            | ≤3                          | ≤3     | ≤3     | ≤3     |     |
|                              |           | 2            | 15~100          | -                           | ≤5     | ≤5     | ≤5     |     |
| Torsional rigidity           | Nm/arcmin | 1,2          | 3~100           | 7                           | 14     | 25     | 50     |     |
| Allowable radial force       | N         | 1,2          | 3~100           | 3000                        | 4300   | 7000   | 10000  |     |
| Allowable axial force        | N         | 1,2          | 3~100           | 2700                        | 3900   | 6300   | 9000   |     |
| Life                         | hr        | 1,2          | 3~100           | 20000                       |        |        |        |     |
| Efficiency                   | %         | 1            | 3~10            | ≥97                         |        |        |        |     |
|                              |           | 2            | 15~100          | ≥94                         |        |        |        |     |
| Weight                       | Kg        | 1            | 3~10            | 1.3                         | 3.7    | 7.8    | 14.5   |     |
|                              |           | 2            | 15~100          | -                           | 4.1    | 9      | 17.5   |     |
| Working temperature          | °C        | -            | -               | -10°C~+90°C                 |        |        |        |     |
| Lubrication way              | -         | -            | -               | Synthetic grease            |        |        |        |     |
| Protection grade             | -         | -            | -               | IP65                        |        |        |        |     |
| Installation direction       | -         | 1,2          | 3~100           | Any direction               |        |        |        |     |
| Noise value                  | dB (A)    | 1,2          | 3~100           | ≤58                         | ≤60    | ≤63    | ≤67    |     |

## Moment Of Inertia Of The Reducer

| Specifications              |                 | Stage Number | Reduction Ratio | 060ZRS | 075ZRS | 100ZRS | 140ZRS |    |
|-----------------------------|-----------------|--------------|-----------------|--------|--------|--------|--------|----|
| The moment of inertia $J_1$ | $Kg \cdot cm^2$ | 1            | 3               | 0.22   | 1.20   | 5.2    | 20     |    |
|                             |                 |              | 4               | 0.17   | 0.95   | 4.0    | 15     |    |
|                             |                 |              | 5               | 0.16   | 0.86   | 3.6    | 13     |    |
|                             |                 |              | 6               | 0.15   | 0.82   | 3.3    | 13     |    |
|                             |                 |              | 7               | 0.14   | 0.79   | 3.1    | 12     |    |
|                             |                 |              | 8               | 0.14   | 0.77   | 3.0    | 12     |    |
|                             |                 |              | 9               | 0.14   | 0.76   | 3.0    | 11     |    |
|                             |                 |              | 10              | 0.14   | 0.75   | 3.0    | 11     |    |
|                             |                 |              | 2               | 15     | -      | 0.72   | 2.8    | 11 |
|                             |                 |              |                 | 20     | -      | 0.72   | 2.8    | 11 |
|                             |                 | 25           |                 | -      | 0.71   | 2.8    | 11     |    |
|                             |                 | 30           |                 | -      | 0.70   | 2.7    | 10     |    |
|                             |                 | 35           |                 | -      | 0.71   | 2.7    | 11     |    |
|                             |                 | 40           |                 | -      | 0.69   | 2.7    | 10     |    |
|                             |                 | 45           |                 | -      | 0.71   | 2.7    | 11     |    |
|                             |                 | 50           |                 | -      | 0.69   | 2.7    | 10     |    |
|                             |                 | 60           |                 | -      | 0.69   | 2.7    | 10     |    |
|                             |                 | 70           |                 | -      | 0.69   | 2.7    | 10     |    |
|                             |                 | 80           | -               | 0.69   | 2.7    | 10     |        |    |
|                             |                 | 90           | -               | 0.69   | 2.7    | 10     |        |    |
| 100                         | -               | 0.69         | 2.7             | 10     |        |        |        |    |

# ZRS DIMENSIONS (SINGLE STAGE I=3-10)

## Dimensional Drawing



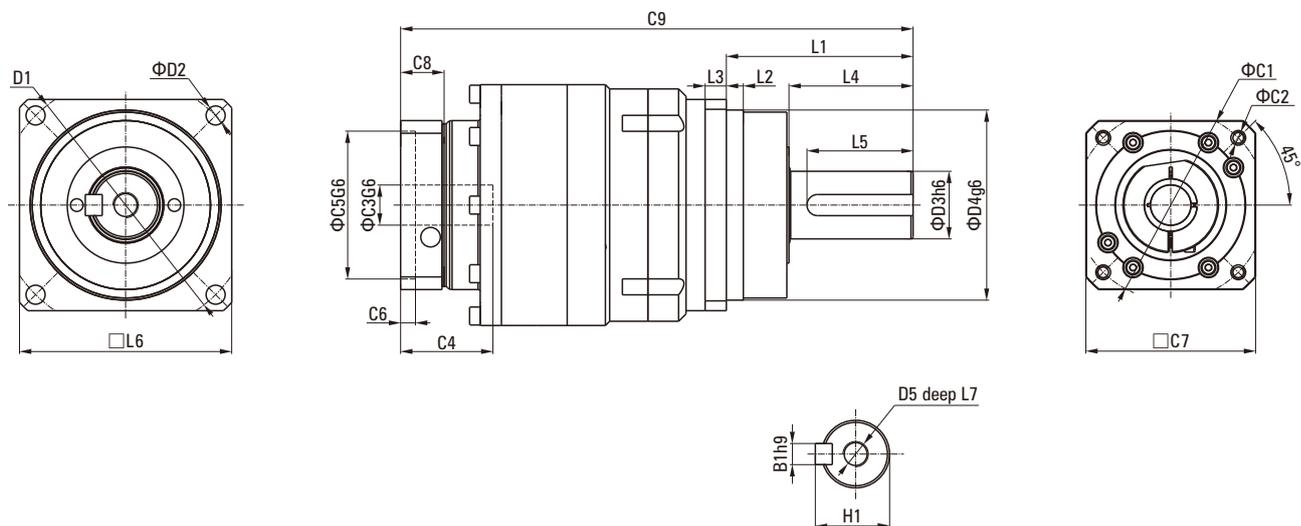
## Dimensional Table

Unit: mm

| Size             | 060ZRS  | 075ZRS   | 100ZRS    | 140ZRS   |
|------------------|---------|----------|-----------|----------|
| D1               | 68      | 85       | 120       | 165      |
| D2               | 5.5     | 7.5      | 9         | 11       |
| D3 <sup>h6</sup> | 16      | 22       | 32        | 40       |
| D4 <sup>g6</sup> | 60      | 70       | 90        | 130      |
| D5               | M5×0.8P | M8×1.25P | M12×1.75P | M16×2P   |
| L1               | 48      | 56       | 88        | 112      |
| L2               | 11      | 6        | 8         | 10       |
| L3               | 6       | 7        | 10        | 12       |
| L4               | 28      | 34.7     | 58        | 82       |
| L5               | 25      | 31       | 50        | 70       |
| L6               | 60      | 75       | 100       | 140      |
| L7               | 15      | 19       | 28        | 36       |
| C1               | 70      | 100      | 145       | 165      |
| C2               | M5×0.8P | M6×1P    | M8×1.25P  | M10×1.5P |
| C3 <sup>g6</sup> | ≤14/≤16 | ≤19/≤24  | ≤32       | ≤38      |
| C4               | 35      | 40.5     | 51        | 60       |
| C5 <sup>g6</sup> | 50      | 80       | 110       | 130      |
| C6               | 8       | 4        | 5         | 6        |
| C7               | 60      | 90       | 130       | 142      |
| C8               | 19.5    | 17.5     | 20        | 22.5     |
| C9               | 96.5    | 167.5    | 224.5     | 295.5    |
| B1 <sup>h9</sup> | 5       | 6        | 10        | 12       |
| H1               | 18      | 24.5     | 35        | 43       |

# ZRS DIMENSIONS (TWO STAGE I=15-100)

## Dimensional Drawing



## Dimensional Table

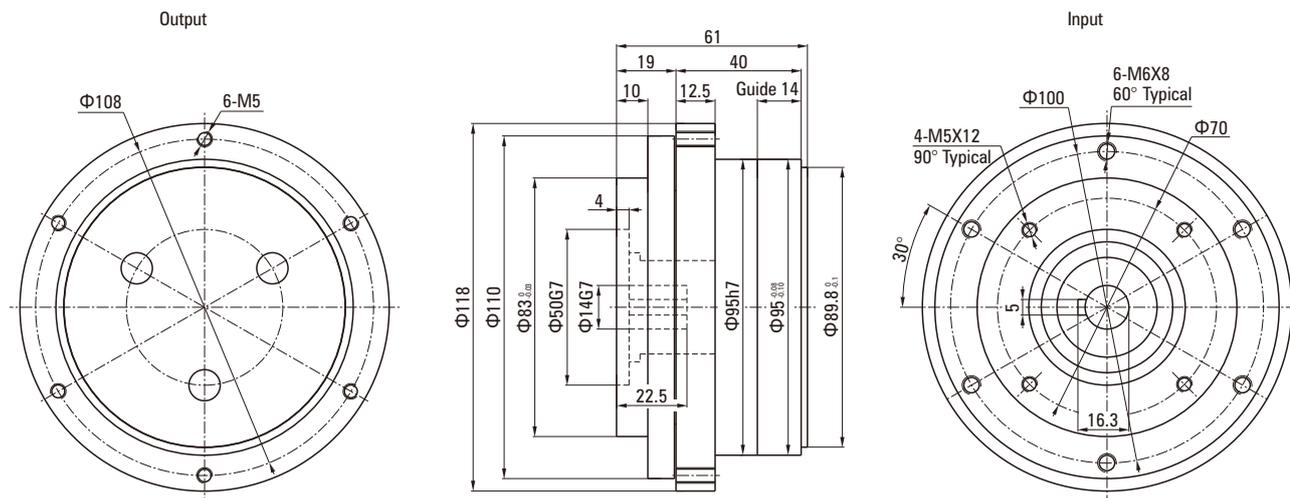
Unit: mm

| Size             | 075ZRS   | 100ZRS    | 140ZRS   |
|------------------|----------|-----------|----------|
| D1               | 85       | 120       | 165      |
| D2               | 7.5      | 9         | 11       |
| D3 <sub>h6</sub> | 22       | 32        | 40       |
| D4 <sub>g6</sub> | 70       | 90        | 130      |
| D5               | M8×1.25P | M12×1.75P | M16×2P   |
| L1               | 56       | 88        | 112      |
| L2               | 6        | 8         | 10       |
| L3               | 7        | 10        | 12       |
| L4               | 34.7     | 58        | 82       |
| L5               | 31       | 50        | 70       |
| L6               | 75       | 100       | 140      |
| L7               | 19       | 28        | 36       |
| C1               | 70       | 100       | 145      |
| C2               | M5×0.8P  | M6×1P     | M8×1.25P |
| C3 <sub>g6</sub> | ≤14/≤16  | ≤19/≤24   | ≤32      |
| C4               | 35       | 40.5      | 51       |
| C5 <sub>g6</sub> | 50       | 80        | 110      |
| C6               | 8        | 4         | 5        |
| C7               | 60       | 90        | 130      |
| C8               | 19.5     | 17.5      | 20       |
| C9               | 186.5    | 241       | 308.5    |
| B1 <sub>h9</sub> | 6        | 10        | 12       |
| H1               | 24.5     | 35        | 43       |

# 95AGV PLANETARY GEARBOX-COMPREHENSIVE PERFORMANCE PARAMETERS OF TRAVELING WHEEL

## Dimensional Drawing

### 95AGV 1 STAGE



## Reducer Performance Data

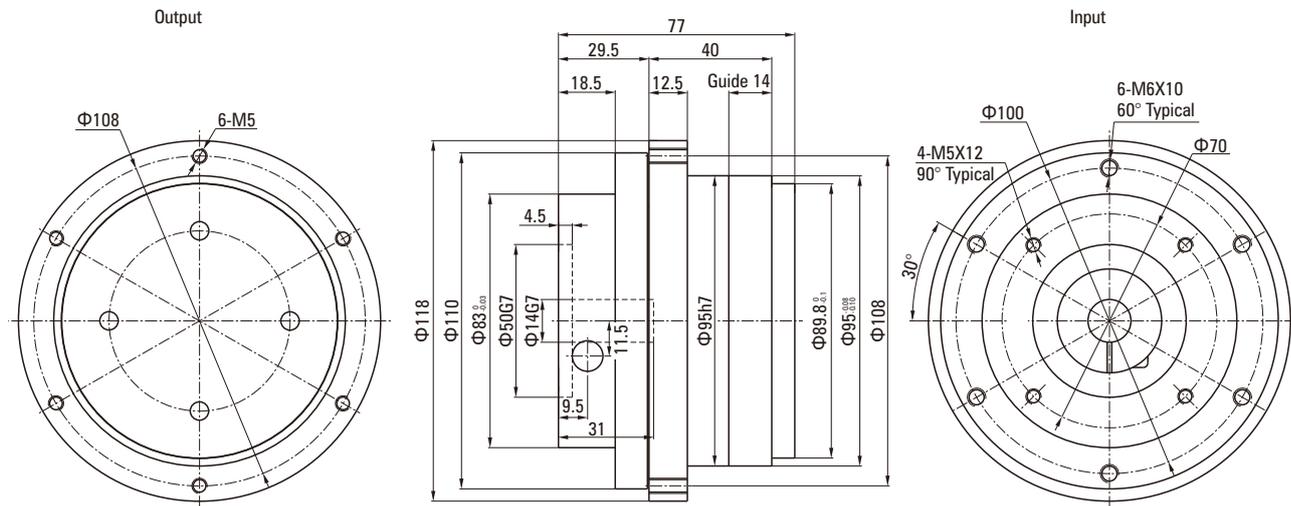
Unit: mm

| Reduction Ratio                               | i<br>(Recommend) | 5   | 6  | 7  | 9  |
|---|------------------|---|----|----|----|
| Nominal output torque T2N                     | Nm               | 60  | 55 | 50 | 40 |
| Maximum acceleration torque T2B               | Nm               | Rated torque*1.8                          |    |    |    |
| Sudden stop torque T2NOT                      | Nm               | 3 time the rated torque                   |    |    |    |
| Nominal input speed                           | rpm              | 3000                                      |    |    |    |
| Maximum input speed                           | rpm              | 4500                                      |    |    |    |
| Backlash                                      | arcmin           | ≤25                                       |    |    |    |
| Maximum radial load                           | N                | 3000                                      |    |    |    |
| Maximum axial load                            | N                | 500                                       |    |    |    |
| Noise value Distance 1m (n=3000 rpm, No load) | dB(A)            | ≤60                                       |    |    |    |
| Service life                                  | h                | 20000                                     |    |    |    |
| Efficiency                                    | %                | 95%                                       |    |    |    |
| Use of temperature                            | °C               | -10°C ~ +90°C                             |    |    |    |
| Lubrication                                   | -                | Synthetic grease                          |    |    |    |
| Weight  | kg               | ≤3.6                                      |    |    |    |
| Rubber wheel specifications (Recommended)     | -                | 150*40 Polyurethane rubber wheel optional |    |    |    |
| Stage number                                  | -                | 1   |    |    |    |

# 95AGV PLANETARY GEARBOX-COMPREHENSIVE PERFORMANCE PARAMETERS OF TRAVELING WHEEL

## Dimensional Drawing

### 95AGV 2 STAGE



## Reducer Performance Data

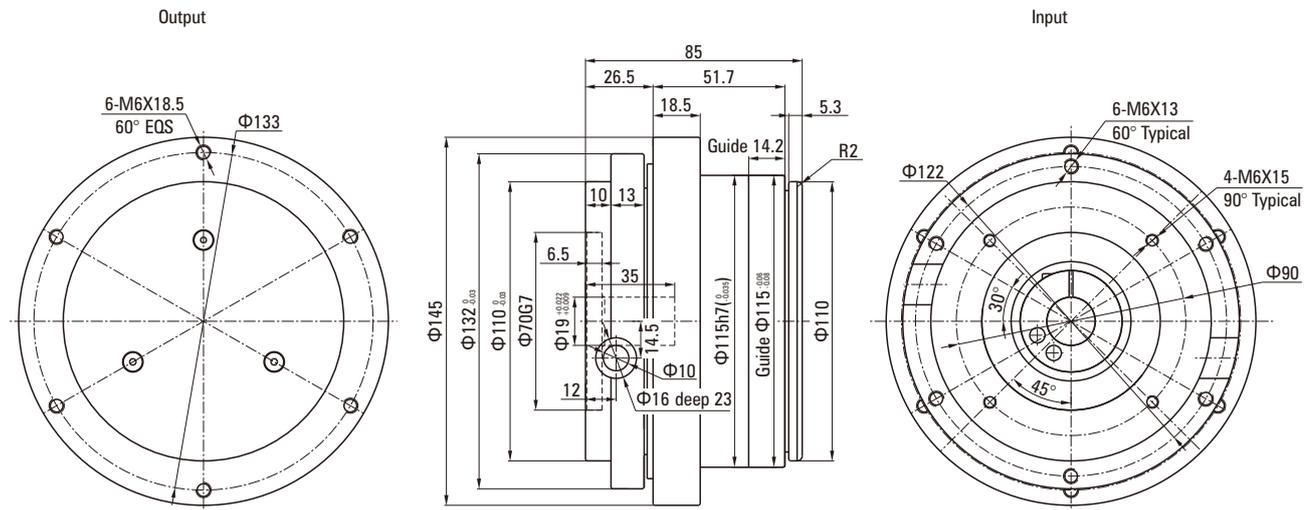
Unit: mm

| Reduction Ratio                               | i<br>(Recommend) | 12  | 15 | 16 | 20 |
|---|------------------|---|----|----|----|
| Nominal output torque T2N                     | Nm               | 55  | 50 | 75 | 70 |
| Maximum acceleration torque T2B               | Nm               | Rated torque*1.8                          |    |    |    |
| Sudden stop torque T2NOT                      | Nm               | 3 time the rated torque                   |    |    |    |
| Nominal input speed                           | rpm              | 3000                                      |    |    |    |
| Maximum input speed                           | rpm              | 4500                                      |    |    |    |
| Backlash                                      | arcmin           | ≤25                                       |    |    |    |
| Maximum radial load                           | N                | 3000                                      |    |    |    |
| Maximum axial load                            | N                | 500                                       |    |    |    |
| Noise value Distance 1m (n=3000 rpm, No load) | dB(A)            | ≤60                                       |    |    |    |
| Service life                                  | h                | 20000                                     |    |    |    |
| Efficiency                                    | %                | 92%                                       |    |    |    |
| Use of temperature                            | °C               | -10°C ~ +90°C                             |    |    |    |
| Lubrication                                   | -                | Synthetic grease                          |    |    |    |
| Weight  | kg               | ≤4.5                                      |    |    |    |
| Rubber wheel specifications (Recommended)     | -                | 150*40 Polyurethane rubber wheel optional |    |    |    |
| Stage number                                  | -                | 2   |    |    |    |

# 115AGV COMPREHENSIVE PERFORMANCE PARAMETERS OF TRAVELING WHEEL

## Dimensional Drawing

### 115AGV Travelling wheel



## Reducer Performance Data

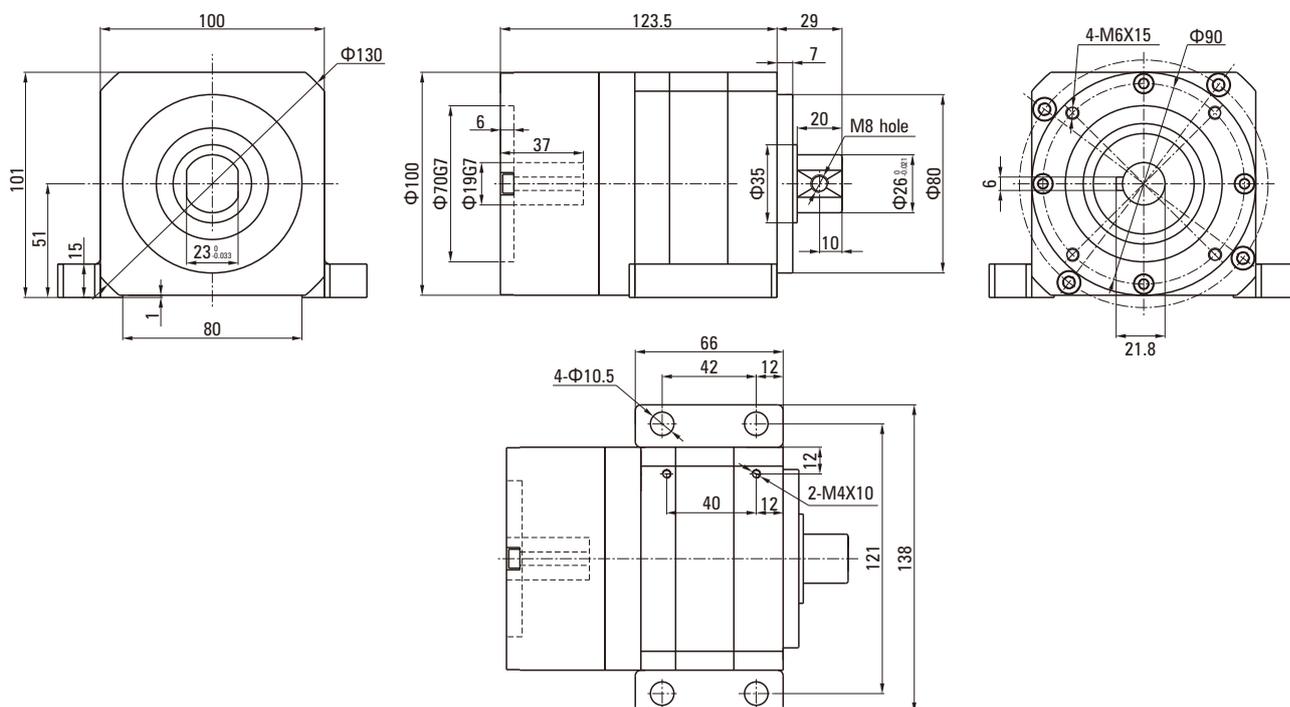
Unit: mm

| Reduction Ratio                               | i<br>(Recommend) | 15  | 18  | 20  | 21  | 30  |
|---|------------------|---|-----|-----|-----|-----|
| Nominal output torque T2N                     | Nm               | 80  | 140 | 100 | 130 | 150 |
| Maximum acceleration torque T2B               | Nm               | Rated torque*1.8                            |     |     |     |     |
| Sudden stop torque T2NOT                      | Nm               | 3 time the rated torque                     |     |     |     |     |
| Nominal input speed                           | rpm              | 3000  |     |     |     |     |
| Maximum input speed                           | rpm              | 6000  |     |     |     |     |
| Backlash                                      | arcmin           | ≤25   |     |     |     |     |
| Maximum radial load                           | N                | 8000  |     |     |     |     |
| Maximum axial load                            | N                | 2000  |     |     |     |     |
| Noise value Distance 1m (n=3000 rpm, No load) | dB(A)            | ≤63   |     |     |     |     |
| Service life                                  | h                | 20000                                       |     |     |     |     |
| Efficiency                                    | %                | 92%   |     |     |     |     |
| Use of temperature                            | °C               | -10°C ~ +90°C                               |     |     |     |     |
| Lubrication                                   | -                | Synthetic grease                            |     |     |     |     |
| Weight  | kg               | ≤5  |     |     |     |     |
| Rubber wheel specifications (Recommended)     | -                | 180*58.5 Polyurethane rubber wheel optional |     |     |     |     |
| Stage number                                  | -                | 2   |     |     |     |     |

# 090AGV PLANETARY GERABOX- COMPREHENSIVE PARAMETER PERFORMANCE OF LIFTING STRUCTURE

## Dimensional Drawing

### 090AGV Lift



## Reducer Performance Data

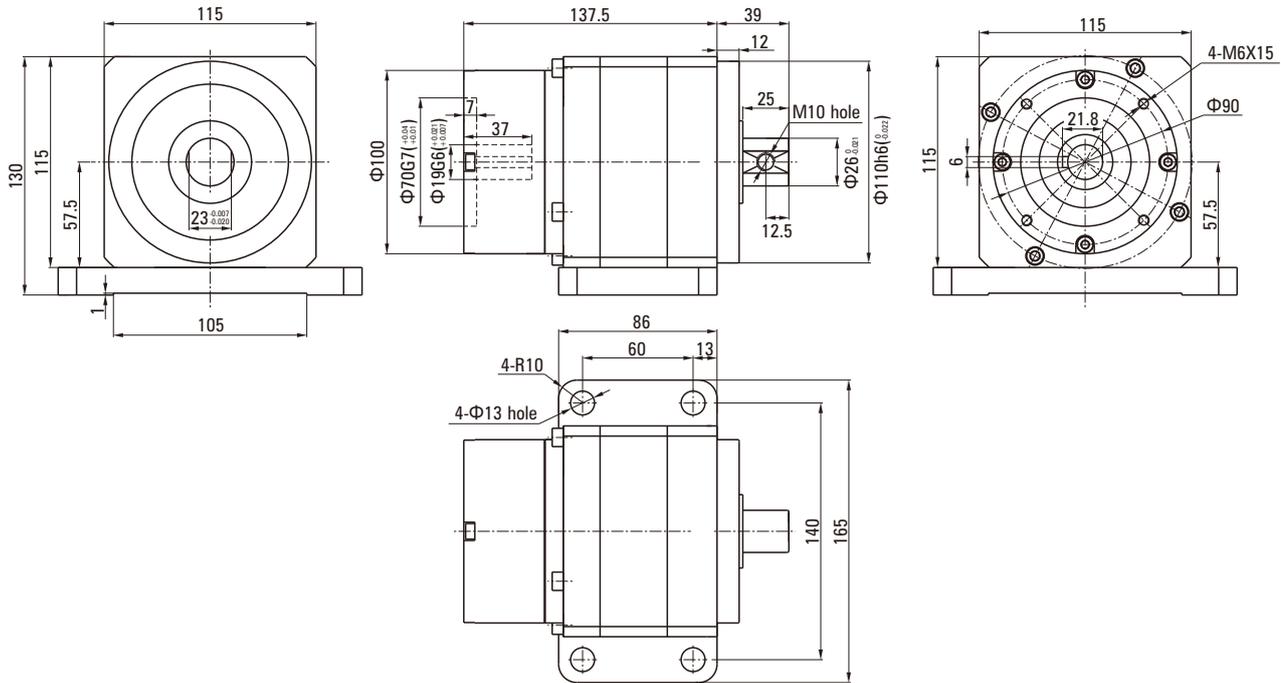
Unit: mm

| Reduction Ratio                               | i<br>(Recommend) | 80                      |
|---|------------------|-------------------------|
| Nominal output torque T <sub>2N</sub>         | Nm               | 180                     |
| Sudden stop torque T <sub>2NOT</sub>          | Nm               | 3 time the rated torque |
| Nominal input speed                           | rpm              | 3000                    |
| Backlash                                      | arcmin           | ≤25                     |
| Maximum radial load                           | N                | 8000                    |
| Maximum axial load                            | N                | 3300                    |
| Noise value Distance 1m (n=3000 rpm, No load) | dB(A)            | ≤63                     |
| Service life                                  | h                | 20000                   |
| Efficiency                                    | %                | 92%                     |
| Use of temperature                            | °C               | -10°C ~ +90°C           |
| Lubrication                                   | -                | Synthetic grease        |
| Weight  | kg               | ≤5                      |
| Stage number                                  | -                | 2                       |

# 115AGV PLANETARY GERABOX- COMPREHENSIVE PARAMETER PERFORMANCE OF LIFTING STRUCTURE

## Dimensional Drawing

● 115AGV Lift



## Reducer Performance Data

Unit: mm

| Reduction Ratio                               | i<br>(Recommend) | 80                      |
|---|------------------|-------------------------|
| Nominal output torque T2N                     | Nm               | 300                     |
| Sudden stop torque T2NOT                      | Nm               | 3 time the rated torque |
| Nominal input speed                           | rpm              | 3000                    |
| Backlash                                      | arcmin           | ≤25                     |
| Maximum radial load                           | N                | 16000                   |
| Maximum axial load                            | N                | 3300                    |
| Noise value Distance 1m (n=3000 rpm, No load) | dB(A)            | ≤65                     |
| Service life                                  | h                | 20000                   |
| Efficiency                                    | %                | 92%                     |
| Use of temperature                            | °C               | -10°C ~ +90°C           |
| Lubrication                                   | -                | Synthetic grease        |
| Weight  | kg               | ≤8                      |
| Stage number                                  | -                | 2                       |

# CATALOGUE



PRECISION HARMONIC REDUCER



CYCLOIDAL PIN WHEEL  
PRECISION REDUCER



TRANSMISSION PLANETARY  
GEAR MOTOR



SERVO DRIVER  
BRUSHLESS DRIVER  
INDUSTRIAL VEHICLE DRIVER  
AC SPEED CONTROLLER



DC BRUSHLESS GEAR MOTOR



MOTOR ROLLER





# HIGH PRECISION PLANETARY GEAR BOX CATALOGUE

Source Engineering Inc.  
Add: 3283-H, De La Cruz Blvd. Santa Clara, CA 95054  
Attn: Sales – Rick Lopez  
Tel: (408) 980-9822  
Mobile: (408) 771-6418  
Rick@sei-automation.com

[www.sei-automation.com](http://www.sei-automation.com)