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## NE SERIES

High precision planetary reducer



## NE series

We provide customers with high-precision, high rigidity, high torque precision planetary reducer.



## NE series assembly (cutting)

### 3 Monoblock housing design

Higher precision  
Ultimate tensile strength  
Higher torsional stiffness

### 2 High precise bearings

Ensuring a higher radial and axial load acceptance

### 1 High performance oil seal

Increased efficiency due to lowered friction  
IP65 enclosure enables continuous duty operation up to 90°C

### 4 Helical gear

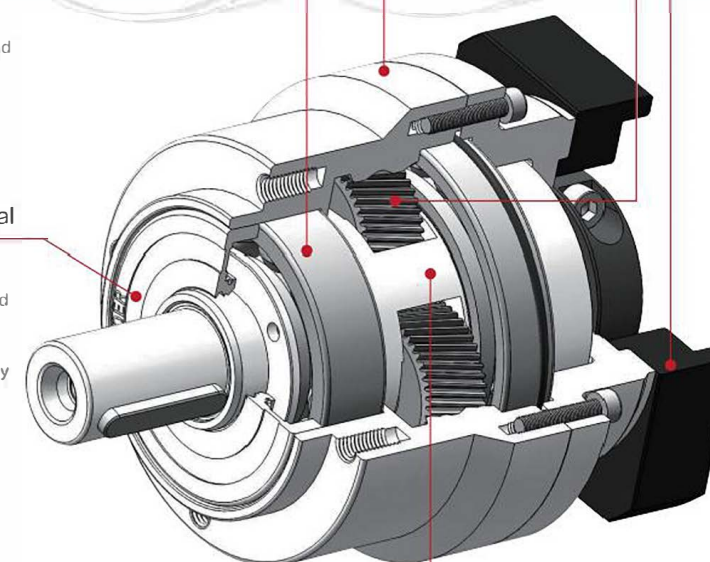
Optimized power transmission  
Low noise  
Improved precision

### 5 Rear cover

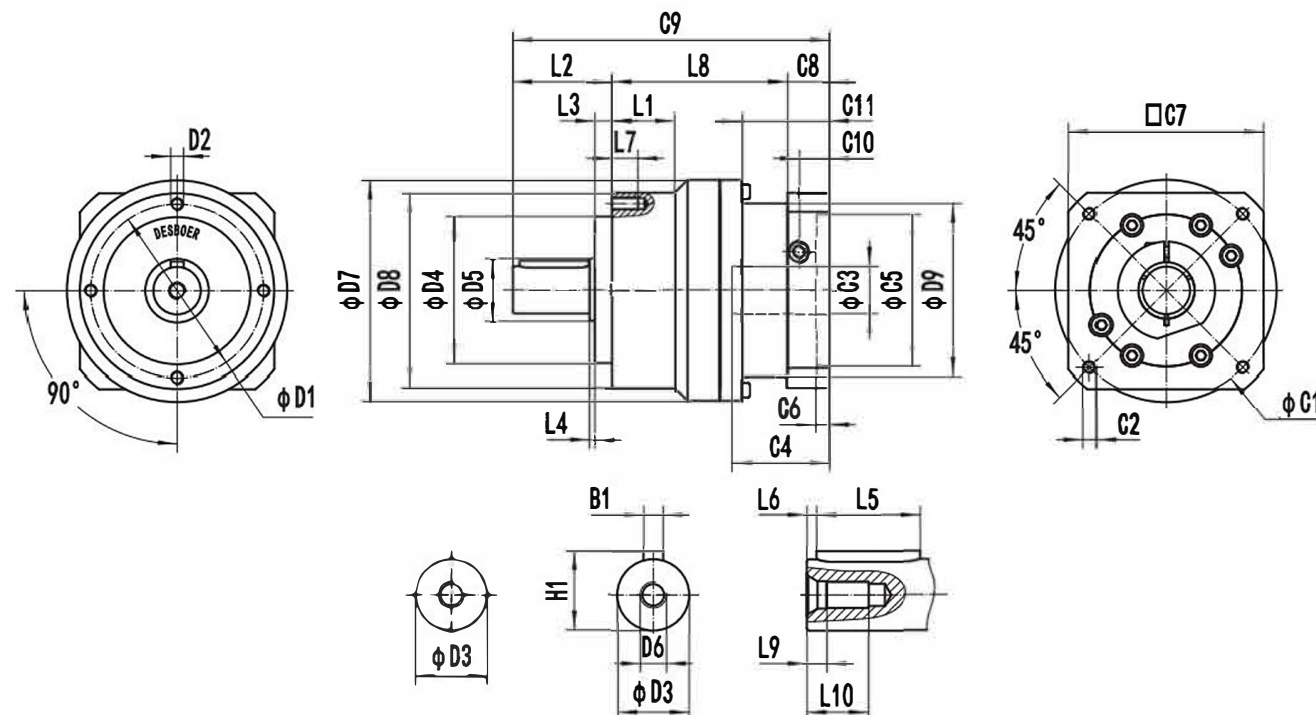
Increased radial load capacity  
Small volume

### 6 Cage designed shaft

High torsional stiffness  
Optimized power transmission



# NE070 Series



shaft types 1    shaft types 2

(Unit: mm)

| NE070 | D1  | D2      | D3      | D4   | D5   | D6      | D7  | D8   | D9    | B1   | H1   |
|-------|-----|---------|---------|------|------|---------|-----|------|-------|------|------|
|       | 62  | M5×0.8P | 16      | 52   | 20.5 | M5×0.8P | 70  | 70   | 56    | 5    | 18   |
|       | L1  | L2      | L3      | L4   | L5   | L6      | L7  | L8   | L9    | L10  |      |
|       | —   | 36      | 6       | 2.5  | 25   | 2       | 12  | 68   | 4     | 15   |      |
|       | C1* | C2*     | C3*     | C4*  | C5*  | C6*     | C7* | C8*  | C9*   | C10* | C11* |
|       | 90  | M6×1P   | ≤14/≤16 | 45.2 | 70   | 14      | 80  | 27.2 | 131.2 | 20.7 | 51.2 |

\*Dimensions based on servo-motor, please contact us for custom made order.

## NE070 Series

## Parameter

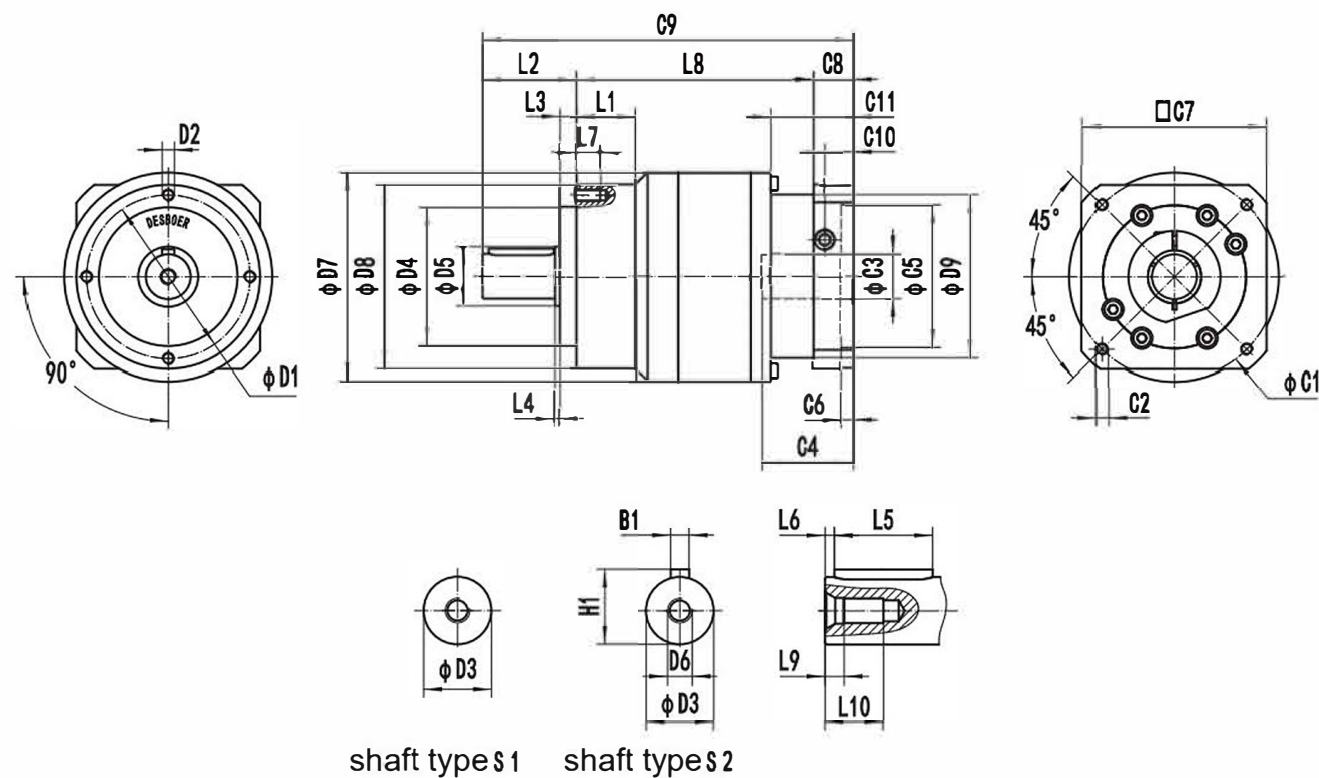
### Gearbox performance data

| Segment number                       |                      | Single segment                           |      |      |    |    |    |    |    |
|--------------------------------------|----------------------|------------------------------------------|------|------|----|----|----|----|----|
| Ratio                                | i                    | 3                                        | 4    | 5    | 6  | 7  | 8  | 9  | 10 |
| Rated output torque                  | Nm                   | 50                                       | 45   | 55   | 50 | 45 | 40 | 35 | 35 |
| Emergency stop torque                | Nm                   | Three times of Maximum Output Torque     |      |      |    |    |    |    |    |
| Rated input speed                    | rpm                  | 5000                                     |      |      |    |    |    |    |    |
| Max input speed                      | rpm                  | 10000                                    |      |      |    |    |    |    |    |
| Precise backlash                     | arcmin               | ≤3                                       |      |      |    |    |    |    |    |
| Standard backlash                    | arcmin               | ≤5                                       |      |      |    |    |    |    |    |
| Torsional rigidity                   | Nm/arcmin            | 7                                        |      |      |    |    |    |    |    |
| Max. radial Force                    | N                    | 1377                                     |      |      |    |    |    |    |    |
| Max. axial Force                     | N                    | 765                                      |      |      |    |    |    |    |    |
| Service Life                         | hr                   | 20000 (10000 under continuous operation) |      |      |    |    |    |    |    |
| Efficiency                           | %                    | ≥97%                                     |      |      |    |    |    |    |    |
| Weight                               | kg                   | 1.4                                      |      |      |    |    |    |    |    |
| Operating Temperature                | °C                   | -10°C ~ +90°C                            |      |      |    |    |    |    |    |
| Lubrication                          |                      | Synthetic grease                         |      |      |    |    |    |    |    |
| Protection Class                     |                      | IP64                                     |      |      |    |    |    |    |    |
| Mounting Position                    |                      | All directions                           |      |      |    |    |    |    |    |
| Noise Level (N1=3000rpm, Non-Loaded) | dB (A)               | ≤58                                      |      |      |    |    |    |    |    |
| Rotary inertia                       | Kg · cm <sup>2</sup> | 0.16                                     | 0.14 | 0.13 |    |    |    |    |    |

★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$

▲ Measured in the shaft center when the output speed is 100rpm

# NE070A Series



(Unit: mm)

| NE070A | D1  | D2      | D3      | D4   | D5   | D6      | D7  | D8   | D9  | B1   | H1   |
|--------|-----|---------|---------|------|------|---------|-----|------|-----|------|------|
|        | 62  | M5×0.8P | 16      | 52   | 20.5 | M5×0.8P | 70  | 70   | 56  | 5    | 18   |
|        | L1  | L2      | L3      | L4   | L5   | L6      | L7  | L8   | L9  | L10  |      |
|        | —   | 36      | 6       | 2.5  | 25   | 2       | 12  | 100  | 4   | 15   |      |
|        | C1* | C2*     | C3*     | C4*  | C5*  | C6*     | C7* | C8*  | C9* | C10* | C11* |
|        | 90  | M6×1P   | ≤14/≤16 | 45.2 | 70   | 14      | 80  | 27.2 | 163 | 20.7 | 50.2 |

\*Dimensions based on servo-motor, please contact us for custom made order.

## Parameter

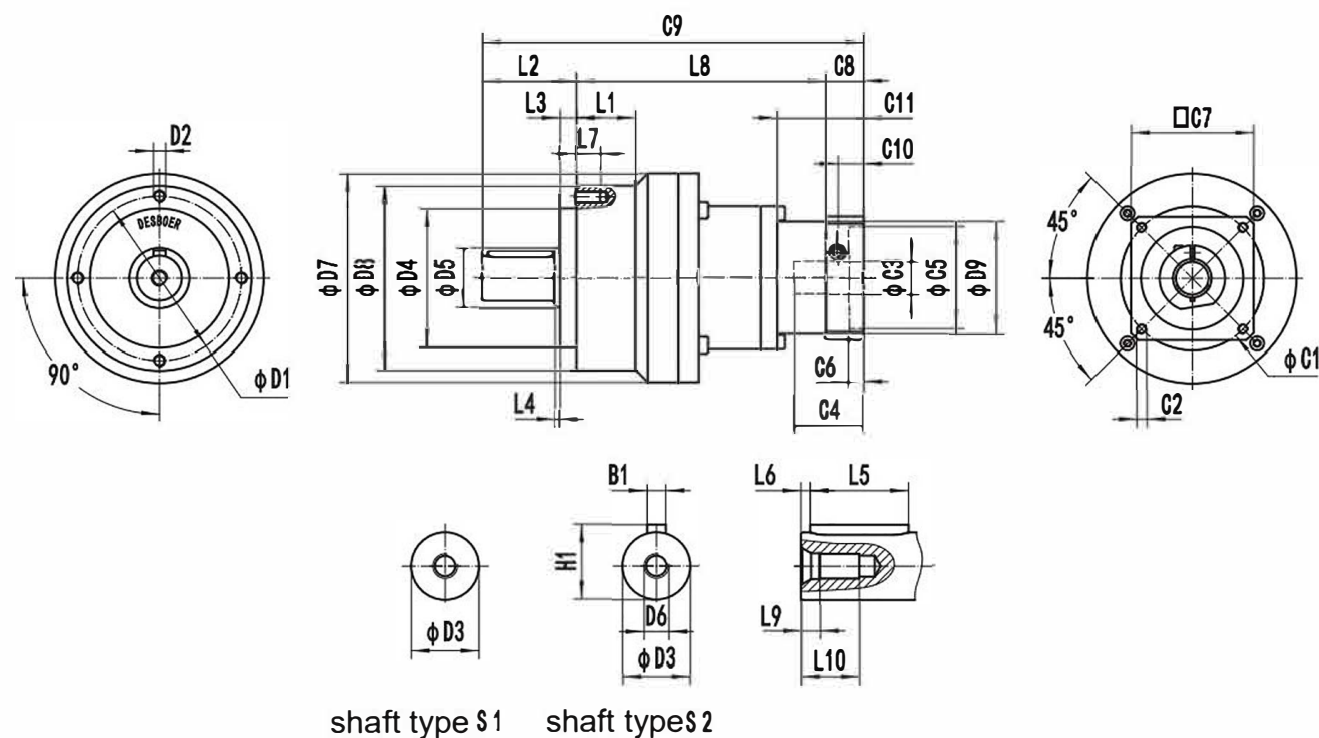
### Gearbox performance data

| Segment number                      |           | Double segment                           |    |    |    |    |    |    |    |    |    |    |    |     |  |
|-------------------------------------|-----------|------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|-----|--|
| Ratio                               | i         | 15                                       | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 |  |
| Rated output torque                 | Nm        | 50                                       | 45 | 55 | 50 | 45 | 40 | 35 | 55 | 50 | 45 | 40 | 35 | 35  |  |
| Emergency stop torque               | Nm        | Three times of Maximum Output Torque     |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Rated input speed                   | rpm       | 5000                                     |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Max input speed                     | rpm       | 10000                                    |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Ultraprecise backlash               | arcmin    | ≤3                                       |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Precise backlash                    | arcmin    | ≤5                                       |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Standard backlash                   | arcmin    | ≤7                                       |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Torsional rigidity                  | Nm/arcmin | 7                                        |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Max. radial Force                   | N         | 1377                                     |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Max. axial Force                    | N         | 765                                      |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Service Life                        | hr        | 20000 (10000 under continuous operation) |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Efficiency                          | %         | ≥94%                                     |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Weight                              | kg        | 1.6                                      |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Operating Temperature               | ℃         | -10℃ ~ +90℃                              |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Lubrication                         |           | Synthetic grease                         |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Protection Class                    |           | IP64                                     |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Mounting Position                   |           | All directions                           |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Noise Level (N1=3000rpm,Non-Loaded) | dB ( A )  | ≤58                                      |    |    |    |    |    |    |    |    |    |    |    |     |  |
| Rotary inertia                      | Kg · cm²  | 0.03                                     |    |    |    |    |    |    |    |    |    |    |    |     |  |

★ Maximum Output Torque  $T_{2B} = 60\% \times T_{2NOT}$

▲ Measured in the shaft center when the output speed is 100rpm

# NE070Series



shaft type S1    shaft type S2

(Unit: mm)

| NE070 | D1  | D2        | D3  | D4  | D5  | D6        | D7  | D8   | D9   | B1    | H1   |
|-------|-----|-----------|-----|-----|-----|-----------|-----|------|------|-------|------|
|       | 62  | M5 × 0.8P | 16  | 52  | 21  | M5 × 0.8P | 70  | 70   | 45.5 | 5     | 18   |
|       | L1  | L2        | L3  | L4  | L5  | L6        | L7  | L8   | L9   | L10   |      |
|       | —   | 36        | 6   | 2.5 | 25  | 2         | 12  | 87.5 | 4    | 15    |      |
|       | C1* | C2*       | C3* | C4* | C5* | C6*       | C7* | C8*  | C9*  | C10*  | C11* |
|       | 46  | M4 × 0.7P | ≤12 | 30  | 30  | 3.5       | 48  | 19.5 | 143  | 13.25 | 19.5 |

\*Dimensions based on servo-motor, please contact us for custom made order.

## NE070 Series

## Parameter

### Gearbox performance data

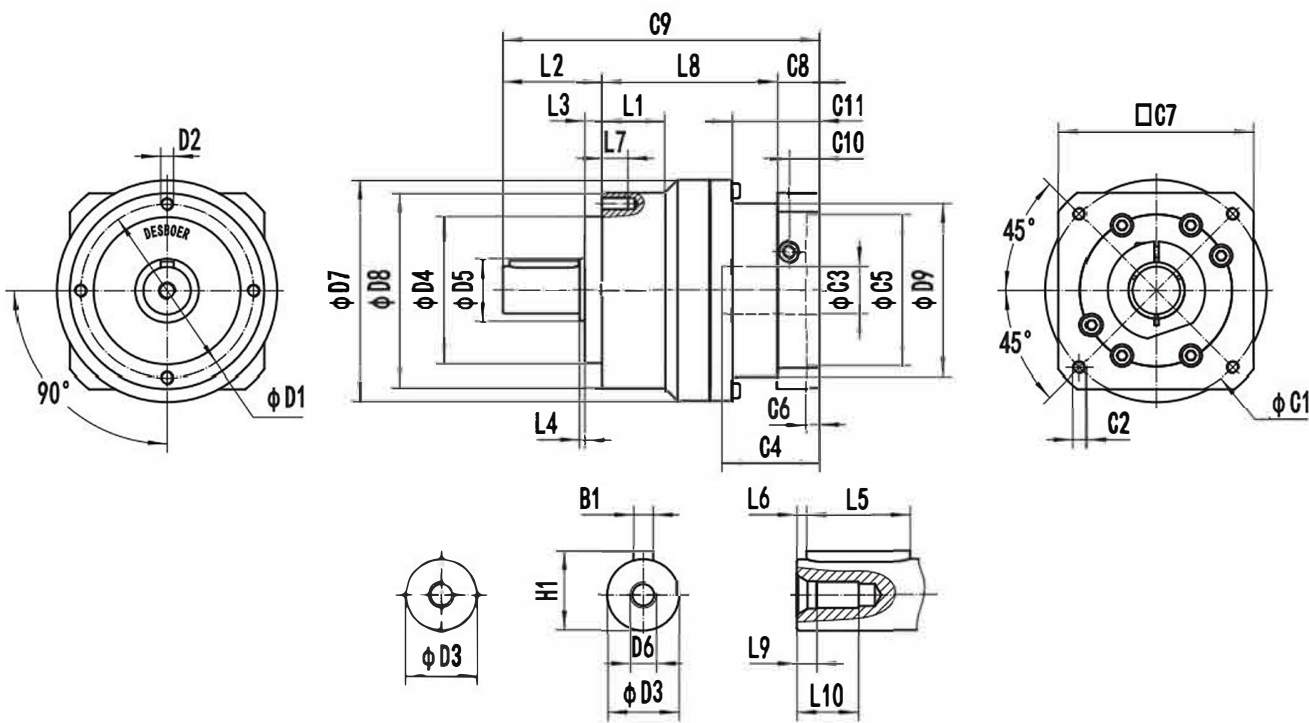
| Segment number                         |           | Double segment                           |    |    |    |    |    |    |    |    |    |    |    |     |
|----------------------------------------|-----------|------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|-----|
| Ratio                                  | i         | 15                                       | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 |
| Rated output torque                    | Nm        | 50                                       | 45 | 55 | 50 | 45 | 40 | 35 | 55 | 50 | 45 | 40 | 35 | 35  |
| Emergency stop torque                  | Nm        | Three times of Maximum Output Torque     |    |    |    |    |    |    |    |    |    |    |    |     |
| Rated input speed                      | rpm       | 5000                                     |    |    |    |    |    |    |    |    |    |    |    |     |
| Max input speed                        | rpm       | 10000                                    |    |    |    |    |    |    |    |    |    |    |    |     |
| Ultraprecise backlash                  | arcmin    | ≤3                                       |    |    |    |    |    |    |    |    |    |    |    |     |
| Precise backlash                       | arcmin    | ≤5                                       |    |    |    |    |    |    |    |    |    |    |    |     |
| Standard backlash                      | arcmin    | ≤7                                       |    |    |    |    |    |    |    |    |    |    |    |     |
| Torsional rigidity                     | Nm/arcmin | 7                                        |    |    |    |    |    |    |    |    |    |    |    |     |
| Max. radial Force                      | N         | 1377                                     |    |    |    |    |    |    |    |    |    |    |    |     |
| Max. axial Force                       | N         | 765                                      |    |    |    |    |    |    |    |    |    |    |    |     |
| Service Life                           | hr        | 20000 (10000 under continuous operation) |    |    |    |    |    |    |    |    |    |    |    |     |
| Efficiency                             | %         | ≥94%                                     |    |    |    |    |    |    |    |    |    |    |    |     |
| Weight                                 | kg        | 1.6                                      |    |    |    |    |    |    |    |    |    |    |    |     |
| Operating Temperature                  | ℃         | -10℃ ~ +90℃                              |    |    |    |    |    |    |    |    |    |    |    |     |
| Lubrication                            |           | Synthetic grease                         |    |    |    |    |    |    |    |    |    |    |    |     |
| Protection Class                       |           | IP64                                     |    |    |    |    |    |    |    |    |    |    |    |     |
| Mounting Position                      |           | All directions                           |    |    |    |    |    |    |    |    |    |    |    |     |
| Noise Level (N1 = 3000rpm, Non-Loaded) | dB ( A )  | ≤58                                      |    |    |    |    |    |    |    |    |    |    |    |     |
| Rotary Inertia                         | Kg · cm²  | 0.03                                     |    |    |    |    |    |    |    |    |    |    |    |     |

★ Maximum Output Torque  $T_{2B} = 60\% \times T_{2NOT}$

▲ Measured in the shaft center when the output speed is 100rpm

NE090 Series

Parameter



shaft type § 1    shaft type § 2

(Unit: mm)

|       |      |         |           |     |     |            |     |      |       |      |      |
|-------|------|---------|-----------|-----|-----|------------|-----|------|-------|------|------|
| NE090 | D1   | D2      | D3        | D4  | D5  | D6         | D7  | D8   | D9    | B1   | H1   |
|       | 80   | M6 × 1P | 22        | 68  | 30  | M8 × 1.25P | 103 | 90   | 80    | 6    | 24.5 |
|       | L1   | L2      | L3        | L4  | L5  | L6         | L7  | L8   | L9    | L10  |      |
|       | 23.5 | 46      | 8         | 2.5 | 32  | 3          | 12  | 81   | 6     | 20   |      |
|       | C1*  | C2*     | C3*       | C4* | C5* | C6*        | C7* | C8*  | C9*   | C10* | C11* |
|       | 90   | M6 × 1P | ≤ 19/≤ 24 | 44  | 70  | 7          | 80  | 19.5 | 146.5 | 14   | 40.5 |

Gearbox performance data

| Segment number                         |                      | Single segment                           |      |      |      |     |     |      |    |
|----------------------------------------|----------------------|------------------------------------------|------|------|------|-----|-----|------|----|
| Ratio                                  | i                    | 3                                        | 4    | 5    | 6    | 7   | 8   | 9    | 10 |
| Rated output torque                    | Nm                   | 120                                      | 130  | 150  | 140  | 130 | 110 | 95   | 95 |
| Emergency stop torque                  | Nm                   | Three times of Maximum Output Torque     |      |      |      |     |     |      |    |
| Rated input speed                      | rpm                  | 4000                                     |      |      |      |     |     |      |    |
| Max input speed                        | rpm                  | 8000                                     |      |      |      |     |     |      |    |
| Precise backlash                       | arcmin               | ≤ 3                                      |      |      |      |     |     |      |    |
| Standard backlash                      | arcmin               | ≤ 5                                      |      |      |      |     |     |      |    |
| Torsional rigidity                     | Nm/arcmin            | 14                                       |      |      |      |     |     |      |    |
| Max. radial Force                      | N                    | 2985                                     |      |      |      |     |     |      |    |
| Max. axial Force                       | N                    | 1625                                     |      |      |      |     |     |      |    |
| Service Life                           | hr                   | 20000 (10000 under continuous operation) |      |      |      |     |     |      |    |
| Efficiency                             | %                    | ≥ 97%                                    |      |      |      |     |     |      |    |
| Weight                                 | kg                   | 3.3                                      |      |      |      |     |     |      |    |
| Operating Temperature                  | ℃                    | -10℃ ~ +90℃                              |      |      |      |     |     |      |    |
| Lubrication                            |                      | Synthetic grease                         |      |      |      |     |     |      |    |
| Protection Class                       |                      | IP64                                     |      |      |      |     |     |      |    |
| Mounting Position                      |                      | All directions                           |      |      |      |     |     |      |    |
| Noise Level (N1 = 3000rpm, Non-Loaded) | dB ( A )             | ≤ 60                                     |      |      |      |     |     |      |    |
| Rotary inertia                         | Kg · cm <sup>2</sup> | 0.61                                     | 0.48 | 0.47 | 0.45 |     |     | 0.44 |    |

- ★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$
- ▲ Measured in the shaft center when the output speed is 100rpm

\*Dimensions based on servo-motor, lease contact us for custom made order.

NE090ASeries

Parameter

Gearbox
performance data

| Segment number                      |           | Double segment                           |     |     |     |     |     |     |     |     |     |     |    |     |
|-------------------------------------|-----------|------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| Ratio                               | i         | 15                                       | 20  | 25  | 30  | 35  | 40  | 45  | 50  | 60  | 70  | 80  | 90 | 100 |
| Rated output torque                 | Nm        | 120                                      | 130 | 150 | 140 | 130 | 110 | 110 | 150 | 140 | 130 | 110 | 95 | 95  |
| Emergency stop torque               | Nm        | Three times of Maximum Output Torque     |     |     |     |     |     |     |     |     |     |     |    |     |
| Rated input speed                   | rpm       | 4000                                     |     |     |     |     |     |     |     |     |     |     |    |     |
| Max input speed                     | rpm       | 8000                                     |     |     |     |     |     |     |     |     |     |     |    |     |
| Ultraprecise backlash               | arcmin    | ≤3                                       |     |     |     |     |     |     |     |     |     |     |    |     |
| Precise backlash                    | arcmin    | ≤5                                       |     |     |     |     |     |     |     |     |     |     |    |     |
| Standard backlash                   | arcmin    | ≤7                                       |     |     |     |     |     |     |     |     |     |     |    |     |
| Torsional rigidity                  | Nm/arcmin | 14                                       |     |     |     |     |     |     |     |     |     |     |    |     |
| Max. radial Force                   | N         | 2985                                     |     |     |     |     |     |     |     |     |     |     |    |     |
| Max. axial Force                    | N         | 1625                                     |     |     |     |     |     |     |     |     |     |     |    |     |
| Service Life                        | hr        | 20000 (10000 under continuous operation) |     |     |     |     |     |     |     |     |     |     |    |     |
| Efficiency                          | %         | ≥94%                                     |     |     |     |     |     |     |     |     |     |     |    |     |
| Weight                              | kg        | 4.7                                      |     |     |     |     |     |     |     |     |     |     |    |     |
| Operating Temperature               | ℃         | -10℃ ~ +90℃                              |     |     |     |     |     |     |     |     |     |     |    |     |
| Lubrication                         |           | Synthetic grease                         |     |     |     |     |     |     |     |     |     |     |    |     |
| Protection Class                    |           | IP64                                     |     |     |     |     |     |     |     |     |     |     |    |     |
| Mounting Position                   |           | All directions                           |     |     |     |     |     |     |     |     |     |     |    |     |
| Noise Level (N1=3000rpm,Non-Loaded) | dB ( A )  | ≤60                                      |     |     |     |     |     |     |     |     |     |     |    |     |
| Rotary inertia                      | Kg · cm²  | 0.13                                     |     |     |     |     |     |     |     |     |     |     |    |     |

★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$   
▲ Measured in the shaft center when the output speed is 100rpm

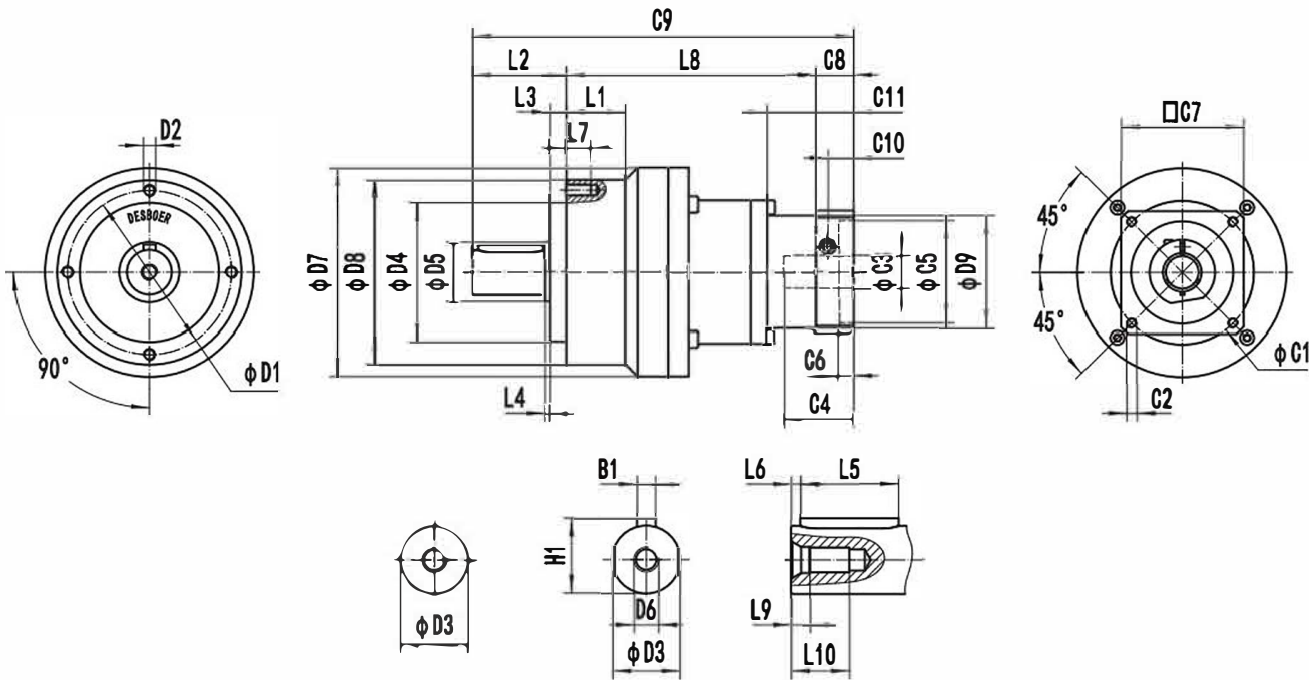
(Unit: mm)

|        |      |         |         |      |     |            |     |      |       |      |      |
|--------|------|---------|---------|------|-----|------------|-----|------|-------|------|------|
| NE090A | D1   | D2      | D3      | D4   | D5  | D6         | D7  | D8   | D9    | B1   | H1   |
|        | 80   | M6 × 1P | 22      | 68   | 30  | M8 × 1.25P | 103 | 90   | 80    | 6    | 24.5 |
|        | L1   | L2      | L3      | L4   | L5  | L6         | L7  | L8   | L9    | L10  |      |
|        | 23.5 | 46      | 8       | 2.5  | 32  | 3          | 12  | 126  | 6     | 20   |      |
|        | C1*  | C2*     | C3*     | C4*  | C5* | C6*        | C7* | C8*  | C9*   | C10* | C11* |
|        | 90   | M6 × 1P | ≤19/≤24 | 43.5 | 70  | 7          | 80  | 19.5 | 191.5 | 14   | 32.5 |

\*Dimensions based on servo-motor,please contact us for custom made order.

NE090 Series

Parameter



shaft types \$1\$    shaft type \$2\$

(Unit: mm)

|       |      |           |           |     |     |            |     |       |       |      |      |
|-------|------|-----------|-----------|-----|-----|------------|-----|-------|-------|------|------|
| NE090 | D1   | D2        | D3        | D4  | D5  | D6         | D7  | D8    | D9    | B1   | H1   |
|       | 80   | M6 × 1P   | 22        | 68  | 30  | M8 × 1.25P | 103 | 90    | 56    | 6    | 24.5 |
|       | L1   | L2        | L3        | L4  | L5  | L6         | L7  | L8    | L9    | L10  |      |
|       | 23.5 | 46        | 8         | 2.5 | 32  | 3          | 12  | 118.5 | 6     | 20   |      |
|       | C1*  | C2*       | C3*       | C4* | C5* | C6*        | C7* | C8*   | C9*   | C10* | C11* |
|       | 70   | M5 × 0.8P | ≤ 14/≤ 16 | 37  | 50  | 8          | 60  | 19    | 183.5 | 14   | 37   |

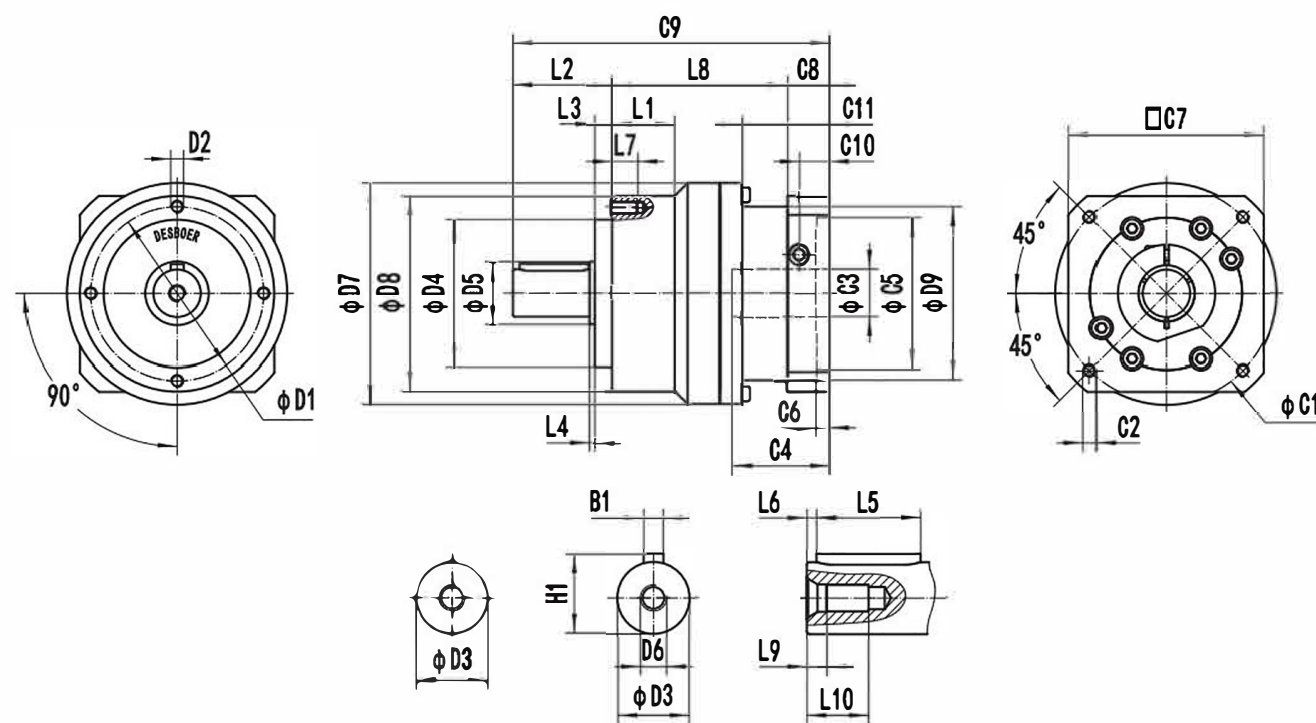
Gearbox  
performance data

| Segment number                      |           | Double segment                           |     |     |     |     |     |    |     |     |     |     |    |     |
|-------------------------------------|-----------|------------------------------------------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|
| Ratio                               | i         | 15                                       | 20  | 25  | 30  | 35  | 40  | 45 | 50  | 60  | 70  | 80  | 90 | 100 |
| Rated output torque                 | Nm        | 120                                      | 130 | 150 | 140 | 130 | 110 | 95 | 150 | 140 | 130 | 110 | 95 | 95  |
| Emergency stop torque               | Nm        | Three times of Maximum Output Torque     |     |     |     |     |     |    |     |     |     |     |    |     |
| Rated input speed                   | rpm       | 4000                                     |     |     |     |     |     |    |     |     |     |     |    |     |
| Max input speed                     | rpm       | 8000                                     |     |     |     |     |     |    |     |     |     |     |    |     |
| Ultraprecise backlash               | arcmin    | ≤3                                       |     |     |     |     |     |    |     |     |     |     |    |     |
| Precise backlash                    | arcmin    | ≤5                                       |     |     |     |     |     |    |     |     |     |     |    |     |
| Standard backlash                   | arcmin    | ≤7                                       |     |     |     |     |     |    |     |     |     |     |    |     |
| Torsional rigidity                  | Nm/arcmin | 14                                       |     |     |     |     |     |    |     |     |     |     |    |     |
| Max. radial Force                   | N         | 2985                                     |     |     |     |     |     |    |     |     |     |     |    |     |
| Max. axial Force                    | N         | 1625                                     |     |     |     |     |     |    |     |     |     |     |    |     |
| Service Life                        | hr        | 20000 (10000 under continuous operation) |     |     |     |     |     |    |     |     |     |     |    |     |
| Efficiency                          | %         | ≥94%                                     |     |     |     |     |     |    |     |     |     |     |    |     |
| Weight                              | kg        | 4.7                                      |     |     |     |     |     |    |     |     |     |     |    |     |
| Operating Temperature               | ℃         | -10℃ ~ +90℃                              |     |     |     |     |     |    |     |     |     |     |    |     |
| Lubrication                         |           | Synthetic grease                         |     |     |     |     |     |    |     |     |     |     |    |     |
| Protection Class                    |           | IP64                                     |     |     |     |     |     |    |     |     |     |     |    |     |
| Mounting Position                   |           | All directions                           |     |     |     |     |     |    |     |     |     |     |    |     |
| Noise Level (N1=3000rpm,Non-Loaded) | dB ( A )  | ≤60                                      |     |     |     |     |     |    |     |     |     |     |    |     |
| Rotary inertia                      | Kg · cm²  | 0.13                                     |     |     |     |     |     |    |     |     |     |     |    |     |

- ★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$
- ▲ Measured in the shaft center when the output speed is 100rpm

\*Dimensions based on servo-motor, please contact us for custom made order.

# NE120Series



shaft type\$ 1    shaft type \$2

(Unit: mm )

| NE120 | D1   | D2         | D3   | D4  | D5  | D6          | D7  | D8   | D9    | B1   | H1   |
|-------|------|------------|------|-----|-----|-------------|-----|------|-------|------|------|
|       | 108  | M8 × 1.25P | 32   | 90  | 40  | M12 × 1.75P | 131 | 120  | 102   | 10   | 35   |
|       | L1   | L2         | L3   | L4  | L5  | L6          | L7  | L8   | L9    | L10  |      |
|       | 32.5 | 70         | 17.5 | 2   | 40  | 5           | 16  | 97.5 | 9.5   | 28   |      |
|       | C1*  | C2*        | C3*  | C4* | C5* | C6*         | C7* | C8*  | C9*   | C10* | C11* |
|       | 130  | M8 × 1.25P | ≤35  | 53  | 110 | 6.5         | 115 | 20   | 187.5 | 13.5 | 48.5 |

\*Dimensions based on servo-motor,please contact us for custom made order.

## NE120Series

## Parameter

### Gearbox performance data

| Segment number                         |                      | Single segment                           |      |      |      |      |      |      |      |
|----------------------------------------|----------------------|------------------------------------------|------|------|------|------|------|------|------|
| Ratio                                  | i                    | 3                                        | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| Rated output torque                    | Nm                   | 190                                      | 270  | 310  | 290  | 280  | 240  | 210  | 210  |
| Emergency stop torque                  | Nm                   | Three times of Maximum Output Torque     |      |      |      |      |      |      |      |
| Rated input speed                      | rpm                  | 4000                                     |      |      |      |      |      |      |      |
| Max input speed                        | rpm                  | 8000                                     |      |      |      |      |      |      |      |
| Precise backlash                       | arcmin               | ≤3                                       |      |      |      |      |      |      |      |
| Standard backlash                      | arcmin               | ≤5                                       |      |      |      |      |      |      |      |
| Torsional rigidity                     | Nm/arcmin            | 25                                       |      |      |      |      |      |      |      |
| Max. radial Force                      | N                    | 6100                                     |      |      |      |      |      |      |      |
| Max. axial Force                       | N                    | 3350                                     |      |      |      |      |      |      |      |
| Service Life                           | hr                   | 20000 (10000 under continuous operation) |      |      |      |      |      |      |      |
| Efficiency                             | %                    | ≥97%                                     |      |      |      |      |      |      |      |
| Weight                                 | kg                   | 6.9                                      |      |      |      |      |      |      |      |
| Operating Temperature                  | ℃                    | -10℃ ~ +90℃                              |      |      |      |      |      |      |      |
| Lubrication                            |                      | Synthetic grease                         |      |      |      |      |      |      |      |
| Protection Class                       |                      | IP64                                     |      |      |      |      |      |      |      |
| Mounting Position                      |                      | All directions                           |      |      |      |      |      |      |      |
| Noise Level (N1 = 3000rpm, Non-Loaded) | dB ( A )             | ≤63                                      |      |      |      |      |      |      |      |
| Rotary inertia                         | Kg · cm <sup>2</sup> | 3.25                                     | 2.74 | 2.71 | 2.65 | 2.62 | 2.58 | 2.57 | 2.57 |

★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$

▲ Measured in the shaft center when the output speed is 100rpm

NE120 Series

Parameter

Gearbox
performance data

| Segment number                      |           | Double segment                           |     |     |     |     |     |      |     |     |     |     |     |     |
|-------------------------------------|-----------|------------------------------------------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|
| Ratio                               | i         | 15                                       | 20  | 25  | 30  | 35  | 40  | 45   | 50  | 60  | 70  | 80  | 90  | 100 |
| Rated output torque                 | Nm        | 190                                      | 270 | 310 | 290 | 280 | 240 | 210  | 310 | 290 | 280 | 240 | 210 | 210 |
| Emergency stop torque               | Nm        | Three times of Maximum Output Torque     |     |     |     |     |     |      |     |     |     |     |     |     |
| Rated input speed                   | rpm       | 4000                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Max input speed                     | rpm       | 8000                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Ultraprecise backlash               | arcmin    | ≤3                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Precise backlash                    | arcmin    | ≤5                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Standard backlash                   | arcmin    | ≤7                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Torsional rigidity                  | Nm/arcmin | 25                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Max. radial Force                   | N         | 6100                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Max. axial Force                    | N         | 3350                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Service Life                        | hr        | 20000 (10000 under continuous operation) |     |     |     |     |     |      |     |     |     |     |     |     |
| Efficiency                          | %         | ≥94%                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Weight                              | kg        | 8.7                                      |     |     |     |     |     |      |     |     |     |     |     |     |
| Operating Temperature               | ℃         | -10℃ ~ +90℃                              |     |     |     |     |     |      |     |     |     |     |     |     |
| Lubrication                         |           | Synthetic grease                         |     |     |     |     |     |      |     |     |     |     |     |     |
| Protection Class                    |           | IP64                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Mounting Position                   |           | All directions                           |     |     |     |     |     |      |     |     |     |     |     |     |
| Noise Level (N1=3000rpm,Non-Loaded) | dB ( A )  | ≤63                                      |     |     |     |     |     |      |     |     |     |     |     |     |
| Rotary inertia                      | Kg · cm²  | 0.47                                     |     |     |     |     |     | 0.44 |     |     |     |     |     |     |

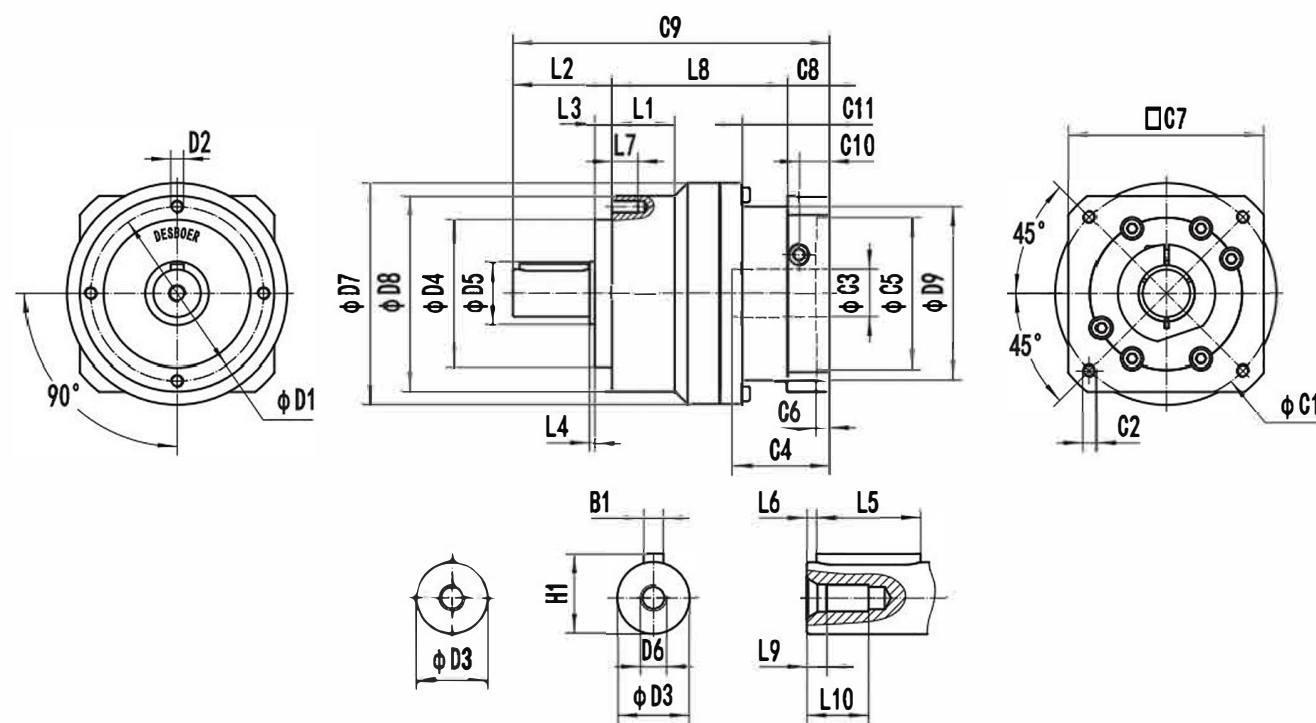
- ★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
- ▲ Measured in the shaft center when the output speed is 100rpm

(Unit: mm)

|       |      |          |         |     |     |           |     |       |     |      |      |
|-------|------|----------|---------|-----|-----|-----------|-----|-------|-----|------|------|
| NE120 | D1   | D2       | D3      | D4  | D5  | D6        | D7  | D8    | D9  | B1   | H1   |
|       | 108  | M8×1.25P | 32      | 90  | 40  | M12×1.75P | 131 | 120   | 82  | 10   | 35   |
|       | L1   | L2       | L3      | L4  | L5  | L6        | L7  | L8    | L9  | L10  |      |
|       | 32.5 | 70       | 17.5    | 2   | 40  | 5         | 16  | 139.5 | 9.5 | 28   |      |
|       | C1*  | C2*      | C3*     | C4* | C5* | C6*       | C7* | C8*   | C9* | C10* | C11* |
|       | 90   | M6×1P    | ≤19/≤24 | 44  | 70  | 7         | 80  | 19.5  | 229 | 14   | 35.5 |

\*Dimensions based on servo-motor,please contact us for custom made order.

# NE155 Series



shaft type 1 shaft type 2

(Unit: mm)

| NE155 | D1   | D2         | D3  | D4  | D5   | D6       | D7  | D8  | D9  | B1   | H1   |
|-------|------|------------|-----|-----|------|----------|-----|-----|-----|------|------|
|       | 140  | M10 × 1.5P | 40  | 120 | 51.5 | M16 × 2P | 162 | 155 | 127 | 12   | 43   |
|       | L1   | L2         | L3  | L4  | L5   | L6       | L7  | L8  | L9  | L10  |      |
|       | 42.5 | 97         | 15  | 3.5 | 70   | 4        | 25  | 122 | 12  | 36   |      |
|       | C1*  | C2*        | C3* | C4* | C5*  | C6*      | C7* | C8* | C9* | C10* | C11* |
|       | 165  | M10 × 1.5P | ≤42 | 67  | 130  | 10       | 142 | 30  | 249 | 20   | 60   |

\*Dimensions based on servo-motor, please contact us for custom made order.

## Parameter

### Gearbox performance data

| Segment number                         |                      | Single segment                           |      |      |      |      |      |      |      |
|----------------------------------------|----------------------|------------------------------------------|------|------|------|------|------|------|------|
| Ratio                                  | i                    | 3                                        | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| Rated output torque                    | Nm                   | 320                                      | 510  | 610  | 570  | 520  | 470  | 420  | 420  |
| Emergency stop torque                  | Nm                   | Three times of Maximum Output Torque     |      |      |      |      |      |      |      |
| Rated input speed                      | rpm                  | 3000                                     |      |      |      |      |      |      |      |
| Max input speed                        | rpm                  | 6000                                     |      |      |      |      |      |      |      |
| Precise backlash                       | arcmin               | ≤3                                       |      |      |      |      |      |      |      |
| Standard backlash                      | arcmin               | ≤5                                       |      |      |      |      |      |      |      |
| Torsional rigidity                     | Nm/arcmin            | 50                                       |      |      |      |      |      |      |      |
| Max. radial Force                      | N                    | 8460                                     |      |      |      |      |      |      |      |
| Max. axial Force                       | N                    | 4700                                     |      |      |      |      |      |      |      |
| Service Life                           | hr                   | 20000 (10000 under continuous operation) |      |      |      |      |      |      |      |
| Efficiency                             | %                    | ≥97%                                     |      |      |      |      |      |      |      |
| Weight                                 | kg                   | 13                                       |      |      |      |      |      |      |      |
| Operating Temperature                  | ℃                    | -10℃ ~ +90℃                              |      |      |      |      |      |      |      |
| Lubrication                            |                      | Synthetic grease                         |      |      |      |      |      |      |      |
| Protection Class                       |                      | IP64                                     |      |      |      |      |      |      |      |
| Mounting Position                      |                      | All directions                           |      |      |      |      |      |      |      |
| Noise Level (N1 = 3000rpm, Non-Loaded) | dB (A)               | ≤65                                      |      |      |      |      |      |      |      |
| Rotary inertia                         | Kg · cm <sup>2</sup> | 9.21                                     | 7.54 | 7.42 | 7.25 | 7.14 | 7.07 | 7.04 | 7.03 |

★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$

▲ Measured in the shaft center when the output speed is 100rpm

NE155Series

Parameter

Gearbox
performance data

| Segment number                      |           | Double segment                           |     |     |     |     |     |      |     |     |     |     |     |     |
|-------------------------------------|-----------|------------------------------------------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|
| Ratio                               | i         | 15                                       | 20  | 25  | 30  | 35  | 40  | 45   | 50  | 60  | 70  | 80  | 90  | 100 |
| Rated output torque                 | Nm        | 320                                      | 510 | 610 | 570 | 520 | 470 | 420  | 610 | 570 | 520 | 470 | 420 | 420 |
| Emergency stop torque               | Nm        | Three times of Maximum Output Torque     |     |     |     |     |     |      |     |     |     |     |     |     |
| Rated input speed                   | rpm       | 3000                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Max input speed                     | rpm       | 6000                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Ultraprecise backlash               | arcmin    | ≤3                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Precise backlash                    | arcmin    | ≤5                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Standard backlash                   | arcmin    | ≤7                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Torsional rigidity                  | Nm/arcmin | 50                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Max. radial Force                   | N         | 8460                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Max. axial Force                    | N         | 4700                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Service Life                        | hr        | 20000 (10000 under continuous operation) |     |     |     |     |     |      |     |     |     |     |     |     |
| Efficiency                          | %         | ≥94%                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Weight                              | kg        | 17                                       |     |     |     |     |     |      |     |     |     |     |     |     |
| Operating Temperature               | ℃         | -10℃ ~ +90℃                              |     |     |     |     |     |      |     |     |     |     |     |     |
| Lubrication                         |           | Synthetic grease                         |     |     |     |     |     |      |     |     |     |     |     |     |
| Protection Class                    |           | IP64                                     |     |     |     |     |     |      |     |     |     |     |     |     |
| Mounting Position                   |           | All directions                           |     |     |     |     |     |      |     |     |     |     |     |     |
| Noise Level (N1=3000rpm,Non-Loaded) | dB ( A )  | ≤65                                      |     |     |     |     |     |      |     |     |     |     |     |     |
| Rotary inertia                      | Kg · cm²  | 2.71                                     |     |     |     |     |     | 2.57 |     |     |     |     |     |     |

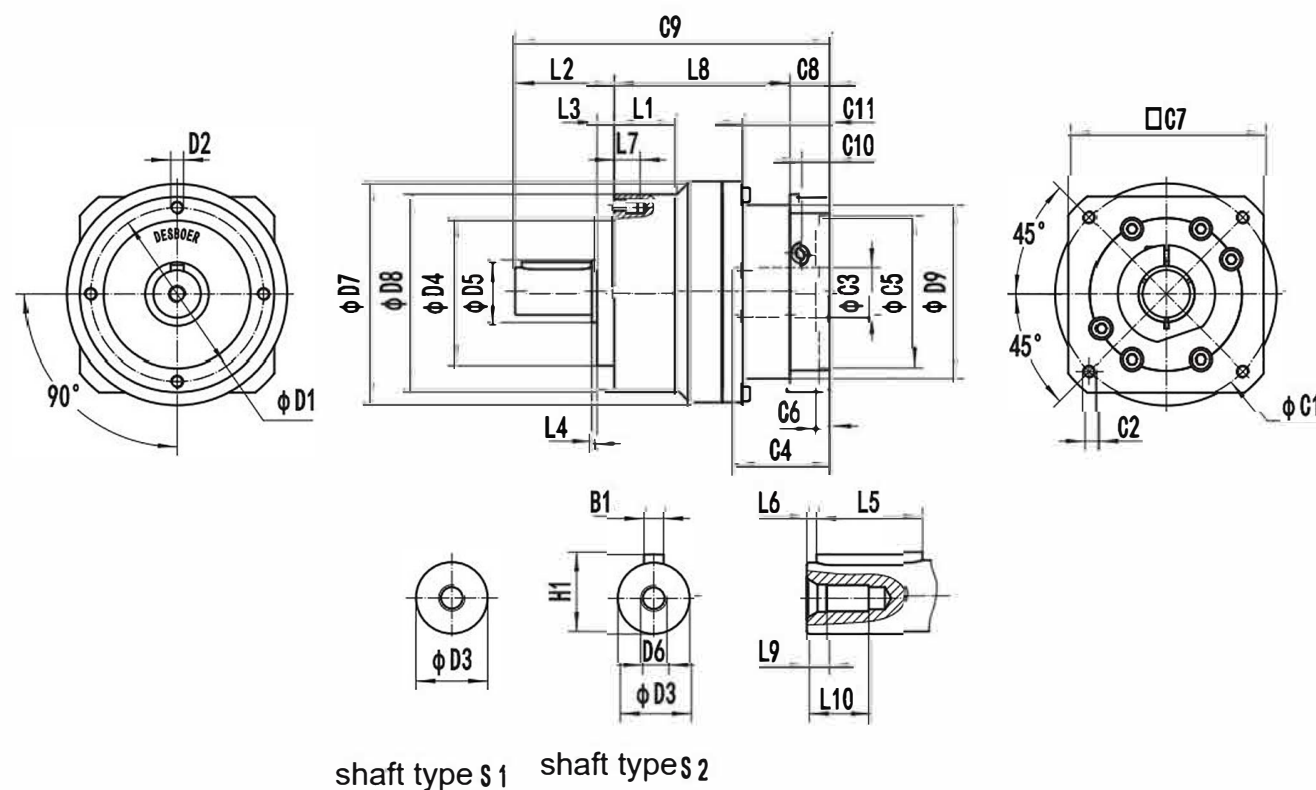
★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$   
▲ Measured in the shaft center when the output speed is 100rpm

(Unit: mm)

|       |      |          |     |      |      |        |     |      |       |      |      |
|-------|------|----------|-----|------|------|--------|-----|------|-------|------|------|
| NE155 | D1   | D2       | D3  | D4   | D5   | D6     | D7  | D8   | D9    | B1   | H1   |
|       | 140  | M10×1.5P | 40  | 120  | 51.5 | M16×2P | 162 | 155  | 109   | 12   | 43   |
|       | L1   | L2       | L3  | L4   | L5   | L6     | L7  | L8   | L9    | L10  |      |
|       | 42.5 | 97       | 15  | 3.5  | 70   | 4      | 25  | 181  | 12    | 36   |      |
|       | C1*  | C2*      | C3* | C4*  | C5*  | C6*    | C7* | C8*  | C9*   | C10* | C11* |
|       | 145  | M8×1.25P | ≤35 | 59.5 | 110  | 13     | 130 | 27.5 | 305.5 | 21   | 48.5 |

\*Dimensions based on servo-motor,please contact us for custom made order.

# NE205 Series



(Unit: mm)

| NE205 | D1  | D2        | D3  | D4  | D5    | D6       | D7  | D8  | D9  | B1   | H1   |
|-------|-----|-----------|-----|-----|-------|----------|-----|-----|-----|------|------|
|       | 184 | M12×1.75P | 55  | 160 | 69.5  | M20×2.5P | 205 | 205 | 167 | 16   | 59   |
|       | L1  | L2        | L3  | L4  | L5    | L6       | L7  | L8  | L9  | L10  |      |
|       | —   | 100       | 15  | 4   | 70    | 6        | 22  | 158 | 15  | 42   |      |
|       | C1* | C2*       | C3* | C4* | C5*   | C6*      | C7* | C8* | C9* | C10* | C11* |
|       | 200 | M12×1.75P | ≤55 | 87  | 114.3 | 6        | 180 | 32  | 290 | 20.5 | 74   |

\*Dimensions based on servo-motor, please contact us for custom made order.

## Parameter

### Gearbox performance data

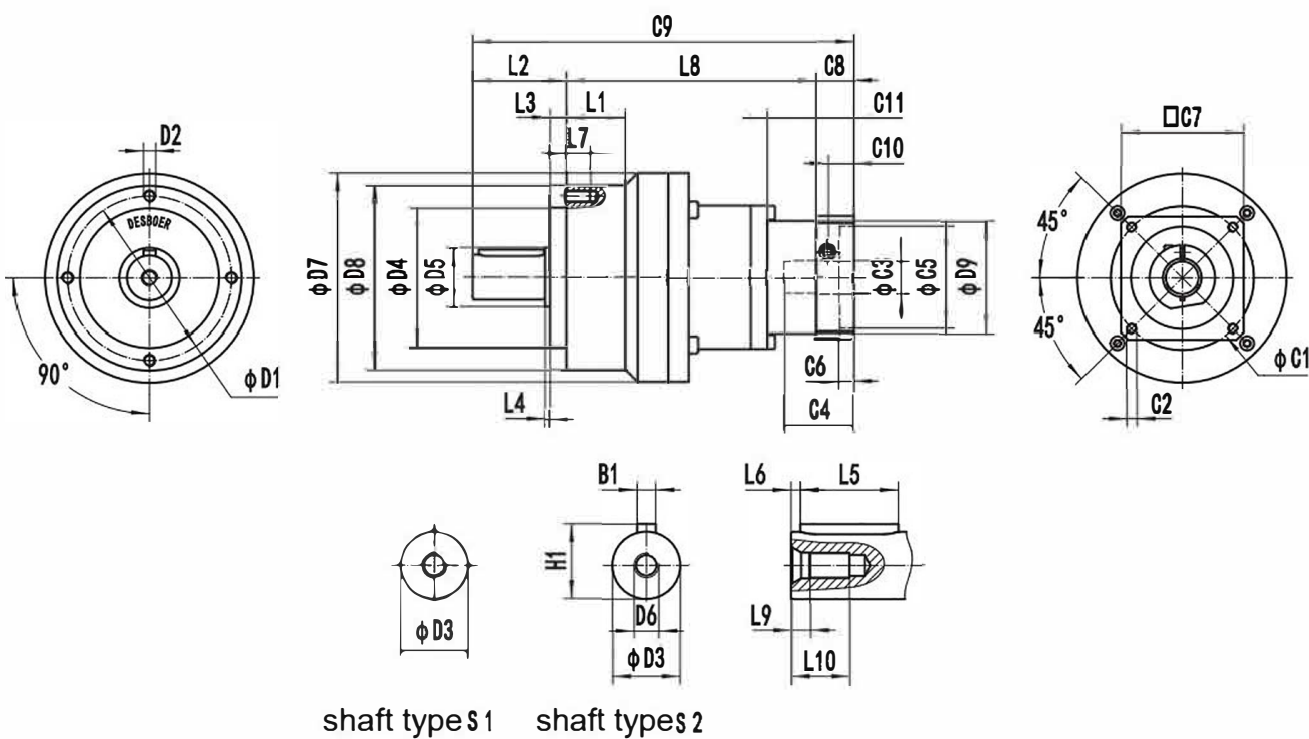
| Segment number                       |                    | Single segment                           |       |       |       |       |       |       |       |
|--------------------------------------|--------------------|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Ratio                                | i                  | 3                                        | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| Rated output torque                  | Nm                 | 550                                      | 990   | 1140  | 1040  | 1040  | 950   | 850   | 850   |
| Emergency stop torque                | Nm                 | Three times of Maximum Output Torque     |       |       |       |       |       |       |       |
| Rated input speed                    | rpm                | 3000                                     |       |       |       |       |       |       |       |
| Max input speed                      | rpm                | 6000                                     |       |       |       |       |       |       |       |
| Precise backlash                     | arcmin             | ≤3                                       |       |       |       |       |       |       |       |
| Standard backlash                    | arcmin             | ≤5                                       |       |       |       |       |       |       |       |
| Torsional rigidity                   | Nm/arcmin          | 145                                      |       |       |       |       |       |       |       |
| Max radial force                     | N                  | 13050                                    |       |       |       |       |       |       |       |
| Max axial force                      | N                  | 7250                                     |       |       |       |       |       |       |       |
| Service life                         | hr                 | 20000 (10000 under continuous operation) |       |       |       |       |       |       |       |
| Efficiency                           | %                  | ≥97%                                     |       |       |       |       |       |       |       |
| Weight                               | kg                 | 31                                       |       |       |       |       |       |       |       |
| Operating temperature                | °C                 | -10°C ~ +90°C                            |       |       |       |       |       |       |       |
| Lubrication                          |                    | Synthetic grease                         |       |       |       |       |       |       |       |
| Protection Class                     |                    | IP64                                     |       |       |       |       |       |       |       |
| Mounting position                    |                    | All directions                           |       |       |       |       |       |       |       |
| Noise Level (N1=3000rpm, Non-Loaded) | dB (A)             | ≤67                                      |       |       |       |       |       |       |       |
| Rotary inertia                       | Kg·cm <sup>2</sup> | 28.98                                    | 23.67 | 23.29 | 22.75 | 22.48 | 22.59 | 22.53 | 22.51 |

★ Maximum Output Torque  $T_{2B}=60\% \times T_{2NOT}$

▲ Measured in the shaft center when the output speed is 100rpm

NE205Series

Parameter



(Unit: mm)

|       |     |           |     |     |      |          |     |     |     |      |      |
|-------|-----|-----------|-----|-----|------|----------|-----|-----|-----|------|------|
| NE205 | D1  | D2        | D3  | D4  | D5   | D6       | D7  | D8  | D9  | B1   | H1   |
|       | 184 | M12×1.75P | 55  | 160 | 69.5 | M20×2.5P | 205 | 205 | 127 | 16   | 59   |
|       | L1  | L2        | L3  | L4  | L5   | L6       | L7  | L8  | L9  | L10  |      |
|       | —   | 100       | 15  | 4   | 70   | 6        | 22  | 218 | 15  | 42   |      |
|       | C1* | C2*       | C3* | C4* | C5*  | C6*      | C7* | C8* | C9* | C10* | C11* |
|       | 165 | M10×1.5P  | ≤42 | 67  | 130  | 10       | 142 | 30  | 348 | 20   | 60   |

—  
Gearbox  
performance data

| Segment number                      |           | Double segment                           |     |      |      |      |     |     |      |      |      |     |     |     |
|-------------------------------------|-----------|------------------------------------------|-----|------|------|------|-----|-----|------|------|------|-----|-----|-----|
| Ratio                               | i         | 15                                       | 20  | 25   | 30   | 35   | 40  | 45  | 50   | 60   | 70   | 80  | 90  | 100 |
| Rated output torque                 | Nm        | 550                                      | 990 | 1140 | 1040 | 1040 | 950 | 850 | 1140 | 1040 | 1040 | 950 | 850 | 850 |
| Emergency stop torque               | Nm        | Three times of Maximum Output Torque     |     |      |      |      |     |     |      |      |      |     |     |     |
| Rated input speed                   | rpm       | 3000                                     |     |      |      |      |     |     |      |      |      |     |     |     |
| Max input speed                     | rpm       | 6000                                     |     |      |      |      |     |     |      |      |      |     |     |     |
| Ultraprecise backlash               | arcmin    | ≤3                                       |     |      |      |      |     |     |      |      |      |     |     |     |
| Precise backlash                    | arcmin    | ≤5                                       |     |      |      |      |     |     |      |      |      |     |     |     |
| Standard backlash                   | arcmin    | ≤7                                       |     |      |      |      |     |     |      |      |      |     |     |     |
| Torsional rigidity                  | Nm/arcmin | 145                                      |     |      |      |      |     |     |      |      |      |     |     |     |
| Max. radial Force                   | N         | 13050                                    |     |      |      |      |     |     |      |      |      |     |     |     |
| Max. axial Force                    | N         | 7250                                     |     |      |      |      |     |     |      |      |      |     |     |     |
| Service Life                        | hr        | 20000 (10000 under continuous operation) |     |      |      |      |     |     |      |      |      |     |     |     |
| Efficiency                          | %         | ≥94%                                     |     |      |      |      |     |     |      |      |      |     |     |     |
| Weight                              | kg        | 35                                       |     |      |      |      |     |     |      |      |      |     |     |     |
| Operating Temperature               | ℃         | -10℃ ~ +90℃                              |     |      |      |      |     |     |      |      |      |     |     |     |
| Lubrication                         |           | Synthetic grease                         |     |      |      |      |     |     |      |      |      |     |     |     |
| Protection Class                    |           | IP64                                     |     |      |      |      |     |     |      |      |      |     |     |     |
| Mounting Position                   |           | All directions                           |     |      |      |      |     |     |      |      |      |     |     |     |
| Noise Level (N1=3000rpm,Non-Loaded) | dB ( A )  | ≤67                                      |     |      |      |      |     |     |      |      |      |     |     |     |
| Rotary inertia                      | Kg · cm²  | 7.42                                     |     |      |      |      |     |     |      | 7.03 |      |     |     |     |

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$   
▲ Measured in the shaft center when the output speed is 100rpm

\*Dimensions based on servo-motor,please contact us for custom made order.