

# MPB series

MPB series provides you with innovative and advanced solutions in technology to maximize efficiency.



# MPB/MPEB SERIES

**Super high efficiency**

Customize planetary reducers with high precision, high rigidity, and high torque for our customers. The MPB series provides you with innovative and advanced solutions in technology to maximize efficiency.

## TECHNICAL PARAMETERS

| Ratio                 | i      | 3~100  |
|-----------------------|--------|--------|
| Backlash              | Arcmin | ≤3/≤5  |
| Rated output torque   | Nm     | 32~540 |
| Operating temperature | °C     | -10~90 |
| Degree of protection  | IP65   |        |
| Work efficiency       | %      | 95     |
| Working life          | h      | 20000  |

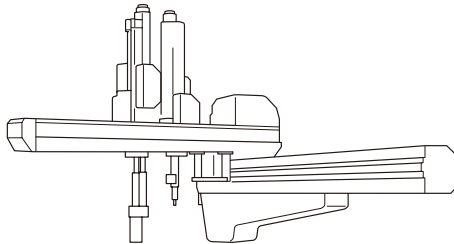
# MPB/MPEB SERIES

## Applications

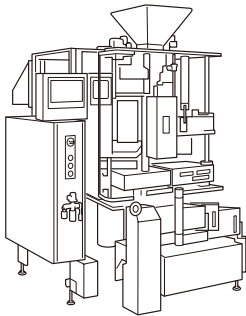
■ Printer



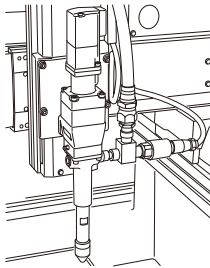
■ Gantry robot



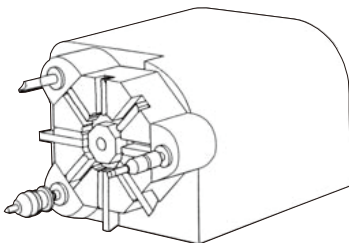
■ Packing machine(vertical type)



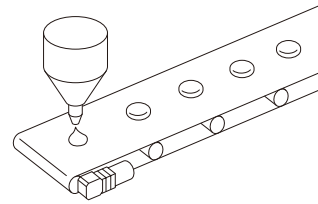
■ Dispenser robot



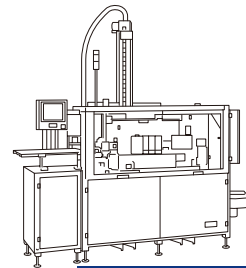
■ Turret head



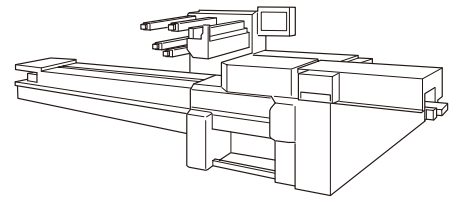
■ Conveyor belt



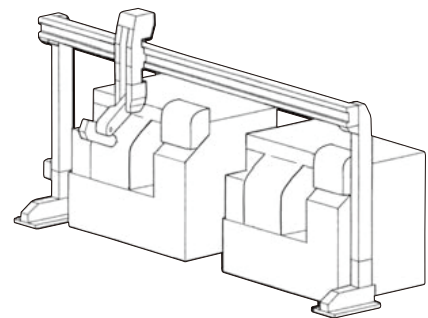
■ Auto packing sealing machine



■ Packing machine(horizontal type)

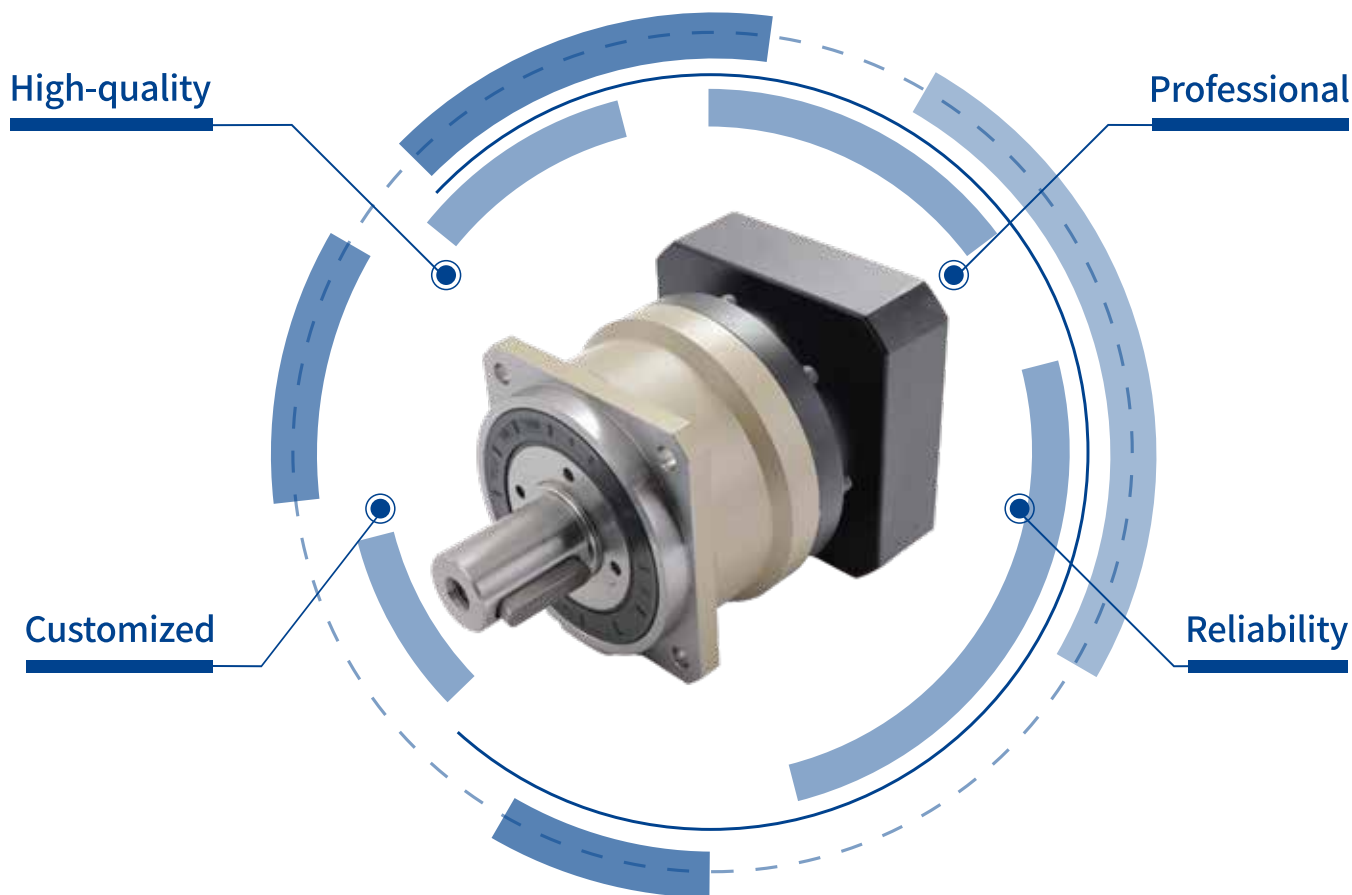


■ Loader robot



**Attachable and applicable to a variety of applications and devices.**

# MPB SERIES



MPB serice-super high efficiency



Output double support, large span, and high stability



Wide tooth surface and high strength



The tooth design is oblique, resulting in a high occlusion rate, smooth rotation, low noise, and minimal back pressure.



The sun gear output shaft bearing is directly designed in the boom to ensure accuracy and concentricity.

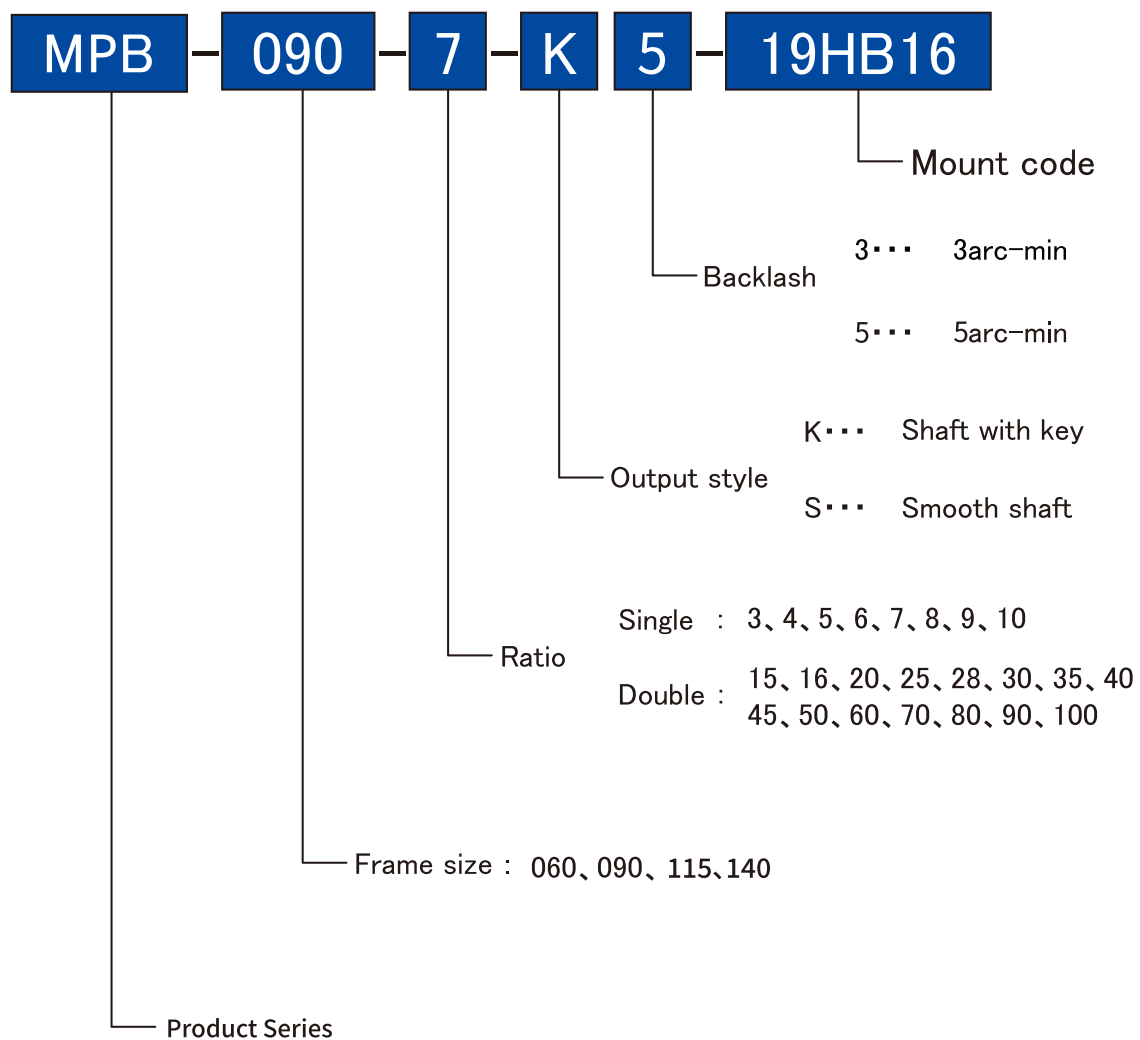


Integrated connection board design, perfectly coordinated with various servos and motors

# MPB SERIES

## Features

---



# MPB SERIES

## Specification

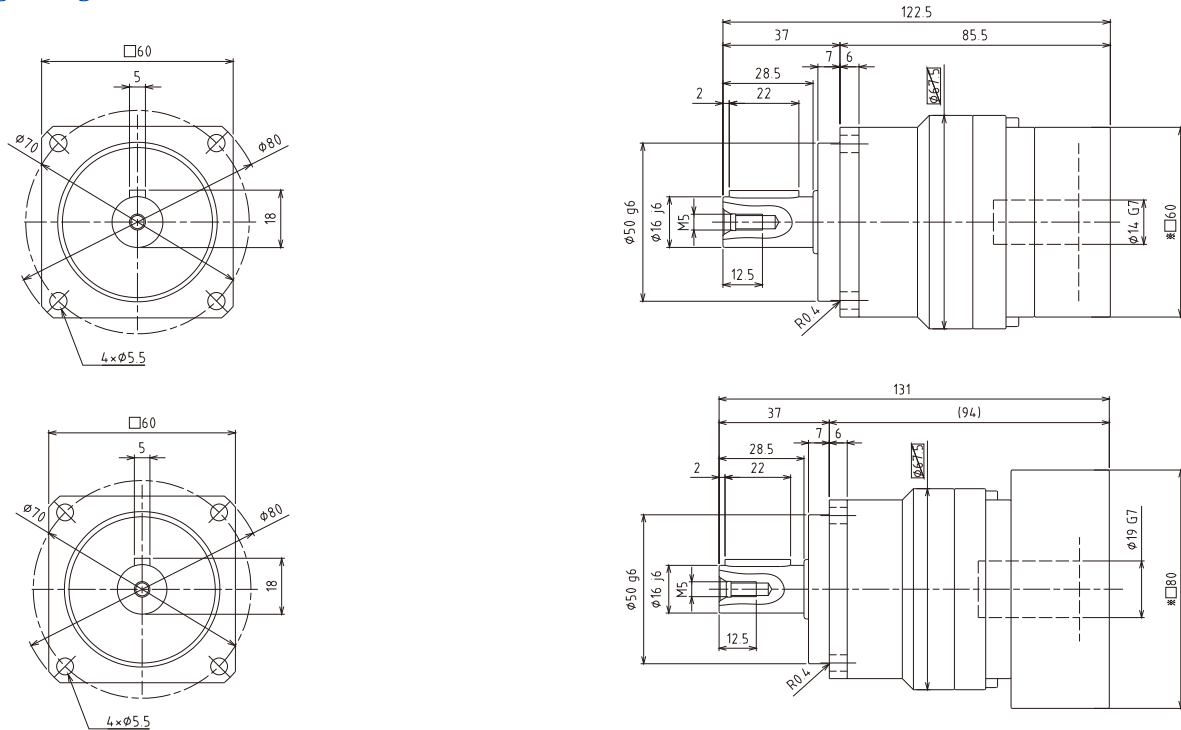
| MPB-060                  |     |                    |                   | Single-stage           |      |      |      |      |      |      |      | Double-stage |      |      |      |      |      |      |      |      |      |  |  |
|--------------------------|-----|--------------------|-------------------|------------------------|------|------|------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|--|--|
| Ratio                    |     | i                  |                   | 3                      | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 15           | 16   | 20   | 25   | 30   | 35   | 40   | 50   | 70   | 100  |  |  |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 44                     | 40   | 40   | 44   | 40   | 36   | 32   | 32   | 44           | 40   | 40   | 48   | 40   | 40   | 40   | 44   | 40   | 32   |  |  |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 3000                   |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 6000                   |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤3/≤5                  |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 930                    |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 860                    |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Work efficiency          |     | η                  | %                 | 95                     |      |      |      |      |      |      |      |              |      | 90   |      |      |      |      |      |      |      |  |  |
| Working life             |     | Lh                 | h                 | 20000                  |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Weight                   |     | m                  | kg                | 1.3                    |      |      |      |      |      |      |      |              |      | 1.8  |      |      |      |      |      |      |      |  |  |
| Installation direction   |     |                    |                   | All direction          |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Operating temperature    |     | °C                 |                   | -10~90                 |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Lubrication / Oil        |     |                    |                   | Lubrication            |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Degree of protection     |     |                    |                   | IP65                   |      |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |  |  |
| Moment of inertia        | ≤14 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.28                   | 0.25 | 0.25 | 0.22 | 0.18 | 0.17 | 0.15 | 0.14 | 0.17         | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.15 |  |  |
|                          | ≤19 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.65                   | 0.6  | 0.55 | 0.55 | 0.52 | 0.5  | 0.5  | 0.48 | 0.18         | 0.18 | 0.16 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.14 | 0.14 |  |  |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

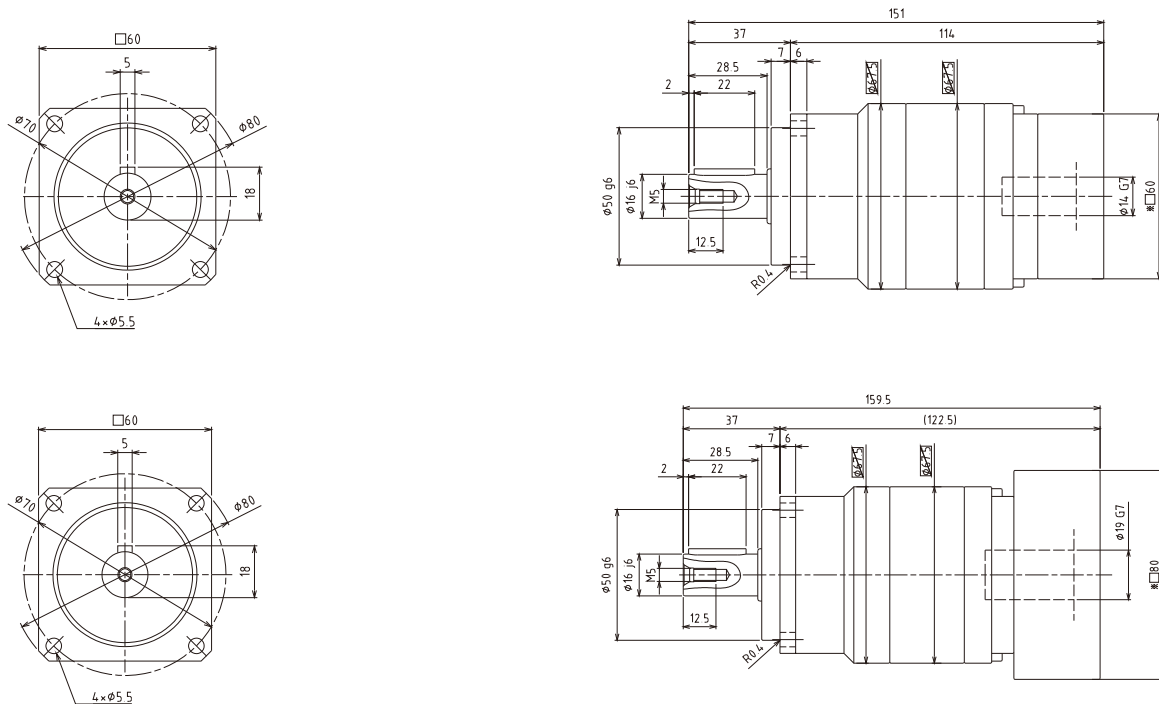
# MPB SERIES

## MPB-060 Dimensions

### Single-stage



### Double-stage



- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPB SERIES

## Specification

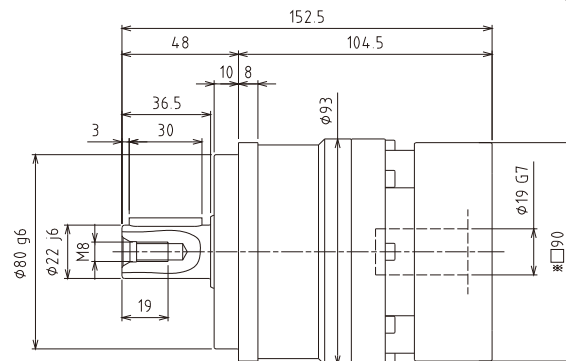
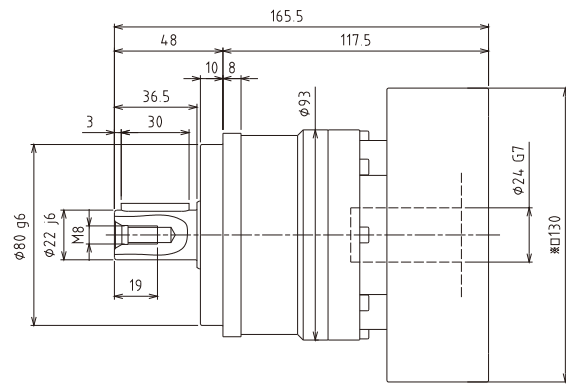
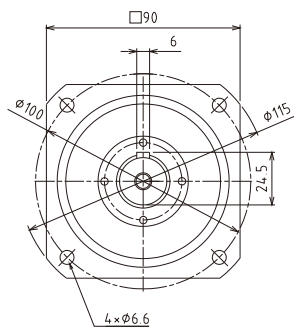
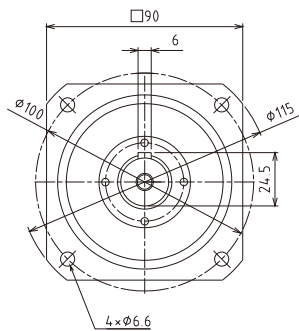
| MPB-090                  |     |                    |                   | Single-stage           |     |     |     |     |     |     | Double-stage |      |      |      |     |      |      |      |      |      |      |
|--------------------------|-----|--------------------|-------------------|------------------------|-----|-----|-----|-----|-----|-----|--------------|------|------|------|-----|------|------|------|------|------|------|
| Ratio                    |     | i                  |                   | 3                      | 4   | 5   | 6   | 7   | 8   | 9   | 10           | 15   | 16   | 20   | 25  | 30   | 35   | 40   | 50   | 70   | 100  |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 130                    | 140 | 160 | 140 | 140 | 120 | 100 | 100          | 130  | 140  | 140  | 160 | 130  | 140  | 140  | 160  | 120  | 100  |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 3000                   |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 6000                   |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤3/≤5                  |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 2350                   |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 1700                   |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Work efficiency          |     | η                  | %                 | 95                     |     |     |     |     |     |     |              |      | 90   |      |     |      |      |      |      |      |      |
| Working life             |     | Lh                 | h                 | 20000                  |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Weight                   |     | m                  | kg                | 3.9                    |     |     |     |     |     |     |              |      | 4.6  |      |     |      |      |      |      |      |      |
| Installation direction   |     |                    |                   | All direction          |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Operating temperature    |     | ℃                  |                   | -10~90                 |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Lubrication / Oil        |     |                    |                   | Lubrication            |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Degree of protection     |     |                    |                   | IP65                   |     |     |     |     |     |     |              |      |      |      |     |      |      |      |      |      |      |
| Moment of inertia        | ≤19 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 1.3                    | 1.3 | 1.2 | 1.1 | 0.9 | 0.8 | 0.7 | 0.6          | 0.25 | 0.23 | 0.21 | 0.2 | 0.18 | 0.18 | 0.18 | 0.08 | 0.16 | 0.16 |
|                          | ≤24 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 2.5                    | 2.4 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | 2.1          | 0.8  | 0.8  | 0.7  | 0.7 | 0.7  | 0.7  | 0.7  | 0.15 | 0.6  | 0.6  |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

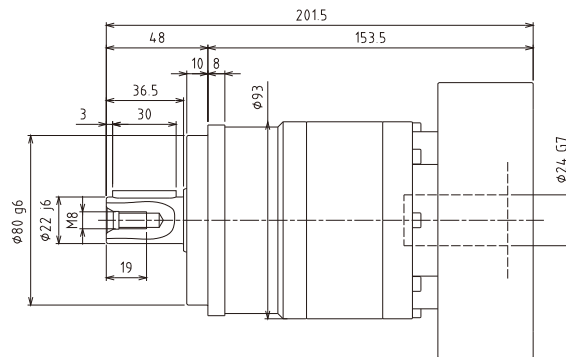
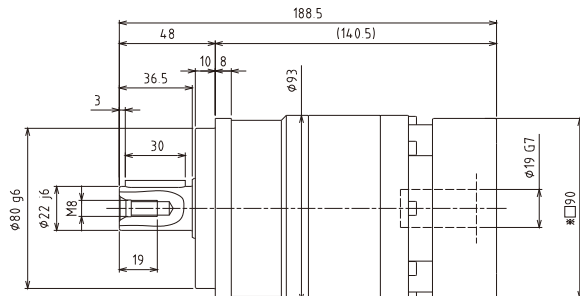
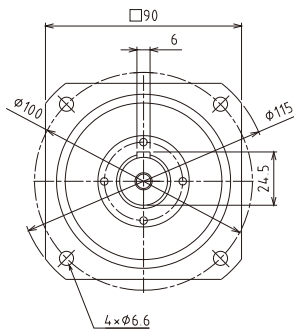
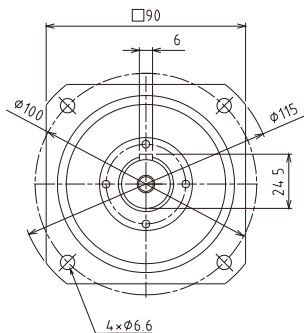
# MPB SERIES

## MPB-090 Dimensions

### Single-stage



### Double-stage



- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPB SERIES

## Specification

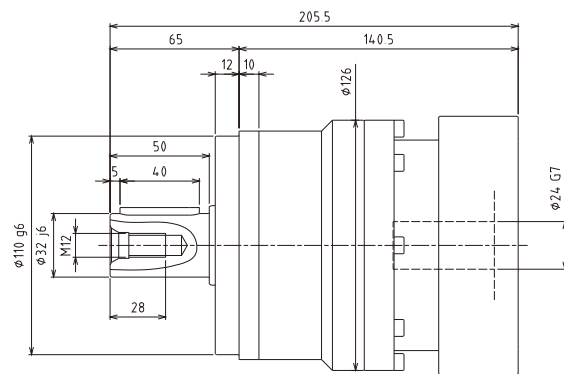
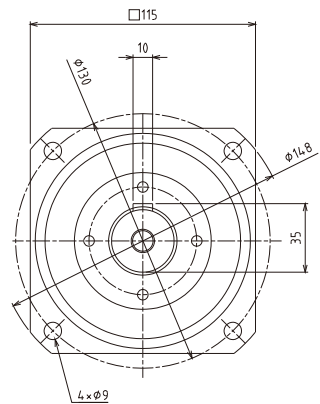
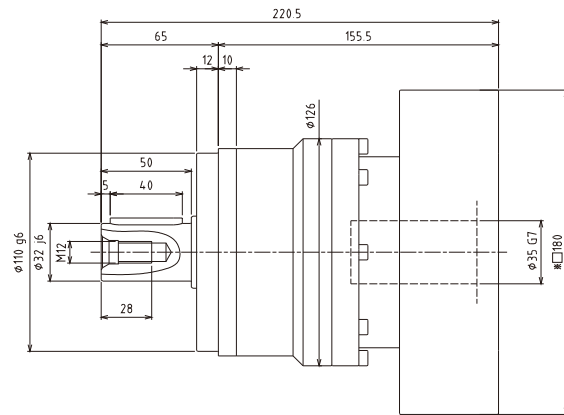
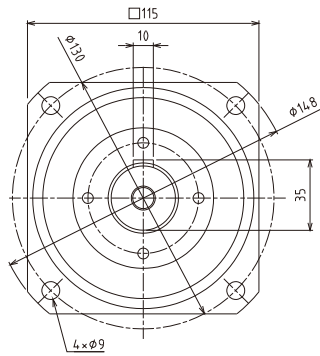
| MPB-115                  |     |                    |                   | Single-stage           |      |     |     |     |     |     | Double-stage |     |     |     |     |     |     |     |     |     |     |  |  |
|--------------------------|-----|--------------------|-------------------|------------------------|------|-----|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Ratio                    |     | i                  |                   | 3                      | 4    | 5   | 6   | 7   | 8   | 9   | 10           | 15  | 16  | 20  | 25  | 30  | 35  | 40  | 50  | 70  | 100 |  |  |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 208                    | 290  | 330 | 300 | 300 | 260 | 230 | 230          | 208 | 290 | 290 | 330 | 300 | 300 | 330 | 330 | 300 | 230 |  |  |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 3000                   |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 6000                   |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤3/≤5                  |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 5100                   |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 3900                   |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Work efficiency          |     | η                  | %                 | 95                     |      |     |     |     |     |     |              |     |     | 90  |     |     |     |     |     |     |     |  |  |
| Working life             |     | Lh                 | h                 | 20000                  |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Weight                   |     | m                  | kg                | 6.2                    |      |     |     |     |     |     |              |     |     | 8.0 |     |     |     |     |     |     |     |  |  |
| Installation direction   |     |                    |                   | All direction          |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Operating temperature    |     | ℃                  |                   | -10~90                 |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Lubrication / Oil        |     |                    |                   | Lubrication            |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Degree of protection     |     |                    |                   | IP65                   |      |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |  |  |
| Moment of inertia        | ≤24 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 4.8                    | 4.6  | 4.5 | 4   | 3.5 | 3   | 2.7 | 2.5          | 2   | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.6 | 1.4 | 1.4 | 1.4 |  |  |
|                          | ≤35 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 11.05                  | 10.5 | 10  | 10  | 9.9 | 9   | 9.6 | 9.5          |     |     |     |     |     |     |     |     |     |     |  |  |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

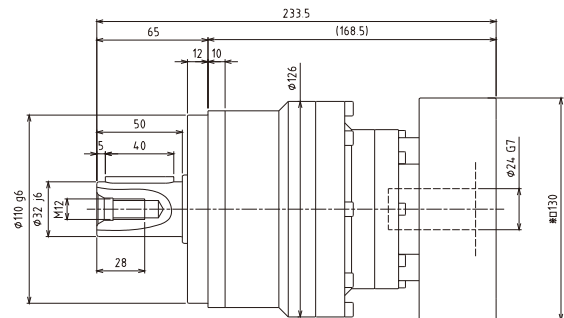
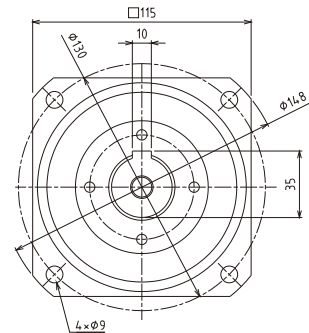
# MPB SERIES

## MPB-115 Dimensions

### Single-stage



### Double-stage



- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPB SERIES

## Specification

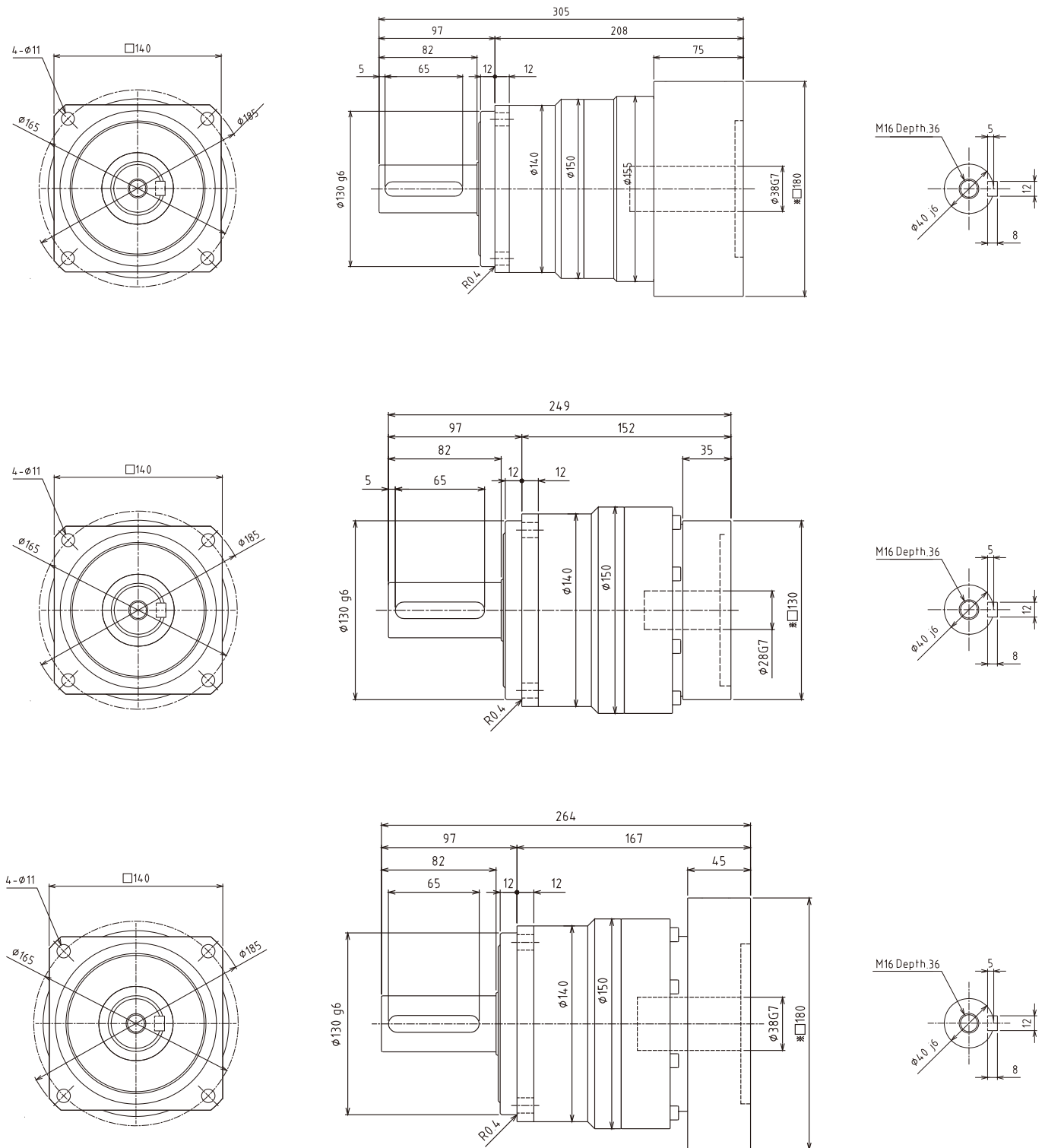
| MPB-140                  |     |                    |                   | Single-stage           |     |     |     |     |     |     | Double-stage |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
|--------------------------|-----|--------------------|-------------------|------------------------|-----|-----|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----|------|-----|------|-----|------|------|-----|-----|-----|-----|
| Ratio                    |     | i                  |                   | 3                      | 4   | 5   | 6   | 7   | 8   | 9   | 10           | 15  | 16  | 20  | 25  | 30  | 35   | 40  | 50   | 70  | 100  |      |     |     |     |     |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 360                    | 360 | 540 | 540 | 540 | 540 | 360 | 360          | 360 | 540 | 540 | 540 | 360 | 540  | 540 | 540  | 540 | 360  |      |     |     |     |     |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 2000                   |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 4000                   |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤5                     |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 8100                   |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 8200                   |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Work efficiency          |     | η                  | %                 | 95                     |     |     |     |     |     |     |              |     |     | 90  |     |     |      |     |      |     |      |      |     |     |     |     |
| Working life             |     | Lh                 | h                 | 20000                  |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Weight                   |     | m                  | kg                | 16                     |     |     |     |     |     |     |              |     |     | 17  |     |     |      |     |      |     |      |      |     |     |     |     |
| Installation direction   |     |                    |                   | All direction          |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Operating temperature    |     | °C                 |                   | -10~90                 |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Lubrication / Oil        |     |                    |                   | Lubrication            |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Degree of protection     |     |                    |                   | IP65                   |     |     |     |     |     |     |              |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |
| Moment of inertia        | ≤19 | J <sub>1</sub>     | Kgcm <sup>2</sup> |                        |     |     |     |     |     |     |              | 1.3 | 1.5 | 1.2 | 1.1 | 1.4 | 0.85 | 1.1 | 0.83 | 1.1 | 0.81 | 0.81 | 0.8 | 0.8 | 0.8 | 0.8 |
|                          | ≤28 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 12                     | 7.5 | 5.8 | 4.9 | 4.1 | 3.8 | 3.6 | 3.5          | 3.2 | 3.5 | 3.1 | 3.1 | 3.3 | 2.8  | 3.1 | 2.8  | 3   | 2.8  | 2.8  | 2.8 | 2.8 | 2.8 | 2.8 |
|                          | ≤38 | J <sub>1</sub>     | Kgcm              | 20                     | 1.5 | 14  | 13  | 12  | 12  | 11  | 11           | 11  | 11  | 11  | 11  | 11  | 10   | 11  | 10   | 10  | 10   | 10   | 10  | 10  | 10  | 10  |
|                          | ≤48 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 42                     | 37  | 36  | 35  | 34  | 34  | 34  | 34           |     |     |     |     |     |      |     |      |     |      |      |     |     |     |     |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

# MPB SERIES

## MPB-140 Dimensions

### Single-stage

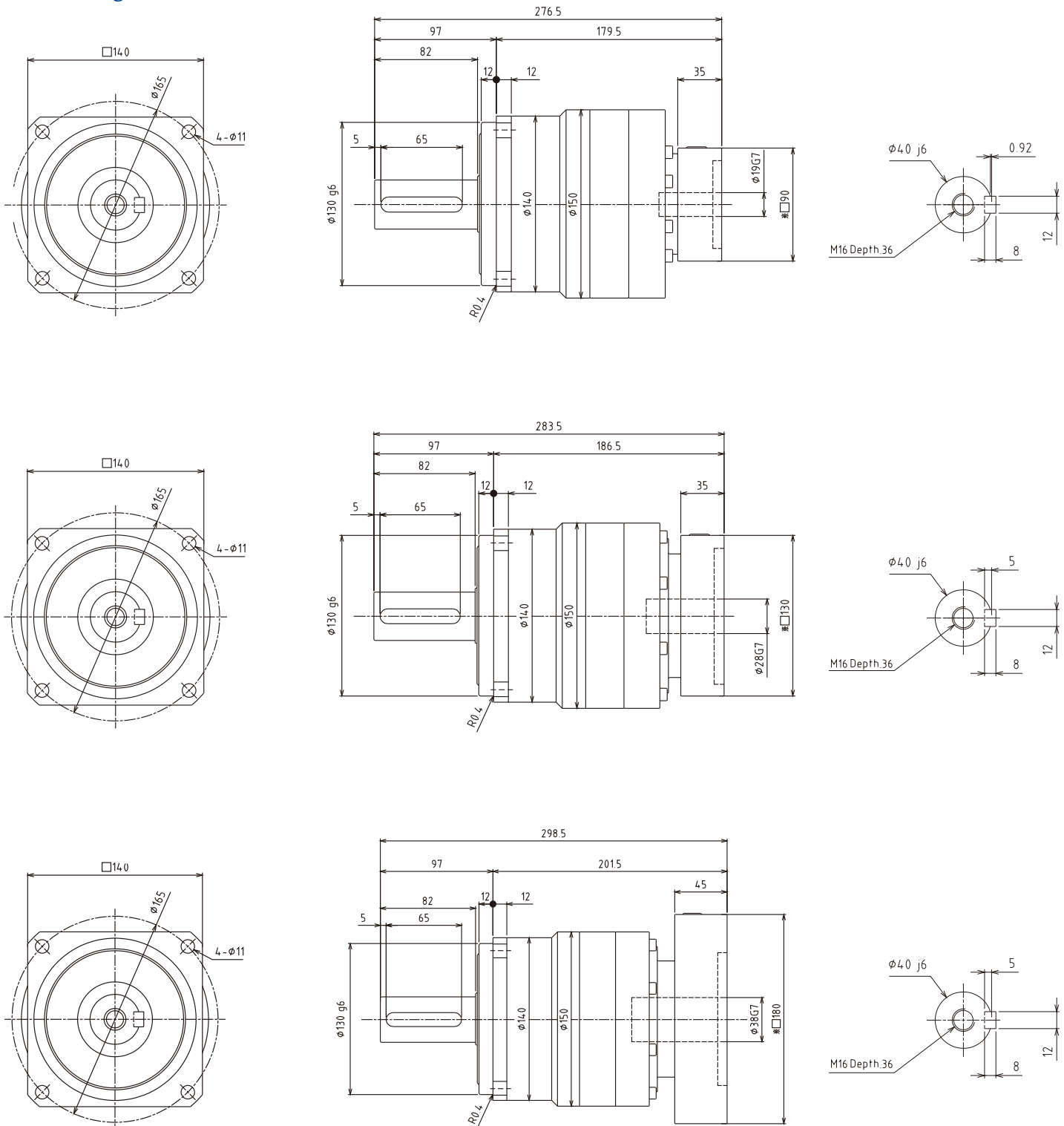


- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPB SERIES

## MPB-140 Dimensions

### Double-stage

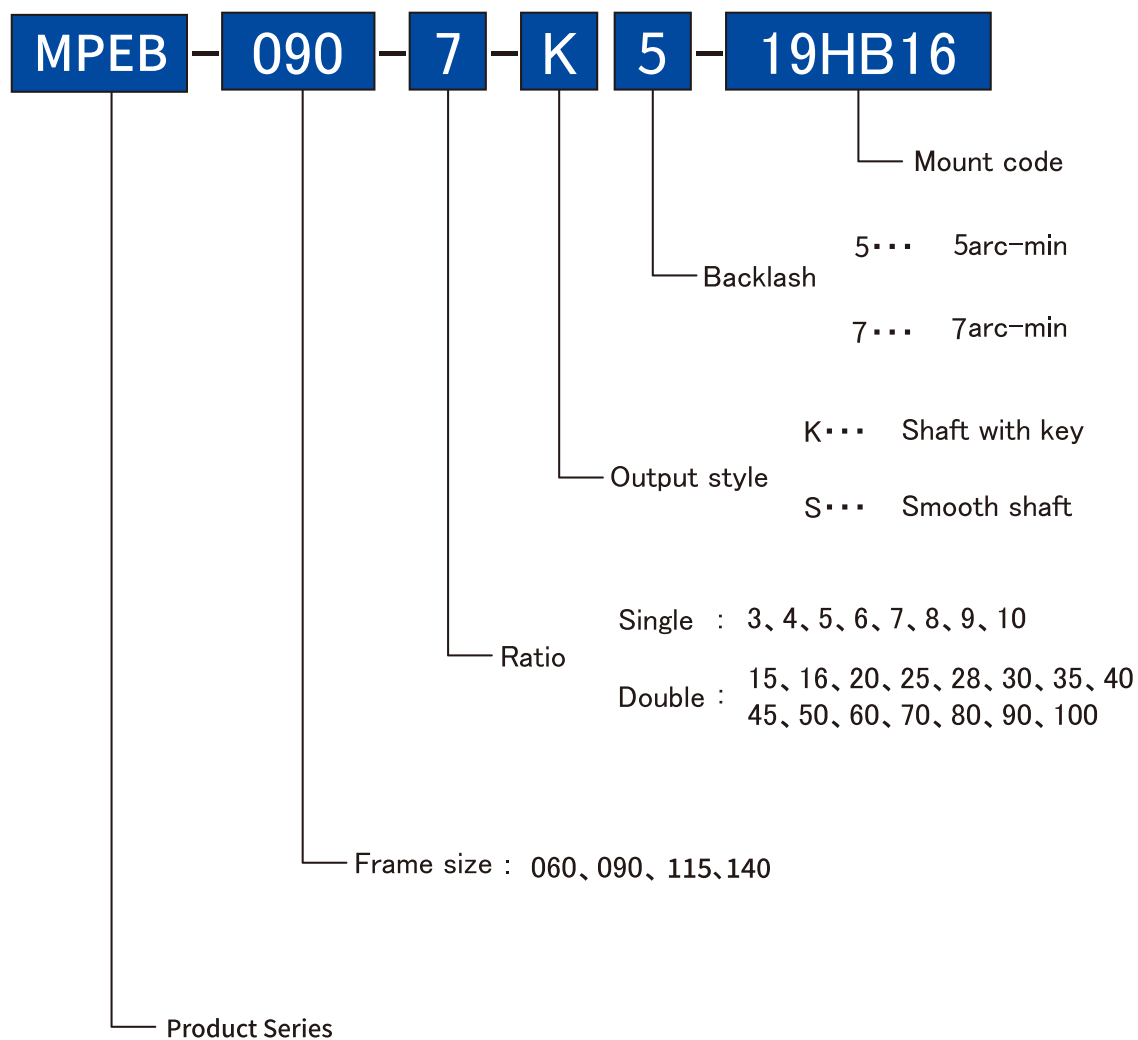


- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPEB SERIES

## Features

---



# MPEB SERIES

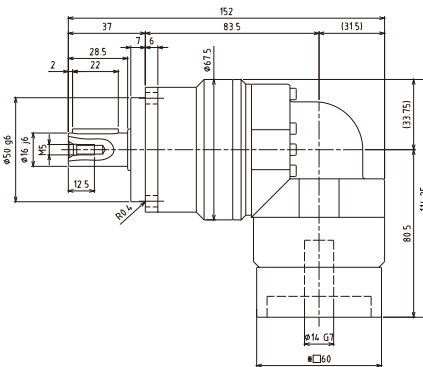
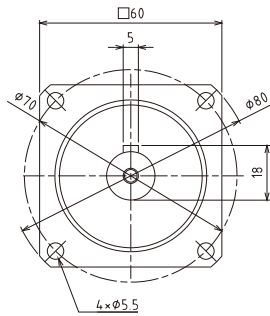
## Specification

| MPEB-060                 |     |                    |                   | Single-stage           |      |      |      |      |      |      | Double-stage |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|-----|--------------------|-------------------|------------------------|------|------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Ratio                    |     | i                  |                   | 3                      | 4    | 5    | 6    | 7    | 8    | 9    | 10           | 15   | 16   | 20   | 25   | 30   | 35   | 40   | 50   | 70   | 100  |      |      |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 40                     | 36   | 36   | 40   | 36   | 32   | 28   | 28           | 40   | 32   | 38   | 43   | 40   | 36   | 36   | 36   | 36   | 23   |      |      |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 3000                   |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 6000                   |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤7                     |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 930                    |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 860                    |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Work efficiency          |     | η                  | %                 | 95                     |      |      |      |      |      |      |              |      |      | 90   |      |      |      |      |      |      |      |      |      |
| Working life             |     | Lh                 | h                 | 20000                  |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Weight                   |     | m                  | kg                | 1.9                    |      |      |      |      |      |      |              |      |      | 2.2  |      |      |      |      |      |      |      |      |      |
| Installation direction   |     |                    |                   | All direction          |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Operating temperature    |     | °C                 |                   | -10~90                 |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Lubrication / Oil        |     |                    |                   | Lubrication            |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Degree of protection     |     |                    |                   | IP65                   |      |      |      |      |      |      |              |      |      |      |      |      |      |      |      |      |      |      |      |
| Moment of inertia        | ≤8  | J <sub>1</sub>     | Kgcm <sup>2</sup> |                        |      |      |      |      |      |      |              |      |      | 0.1  | 0.1  | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
|                          | ≤14 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.28                   | 0.25 | 0.25 | 0.18 | 0.17 | 0.15 | 0.14 | 0.14         | 0.13 | 0.12 | 0.18 | 0.18 | 0.16 | 0.15 | 0.15 | 0.15 | 0.15 | 0.14 | 0.14 |      |
|                          | ≤19 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.65                   | 0.6  | 0.55 | 0.55 | 0.5  | 0.5  | 0.48 | 0.48         | 0.45 | 0.42 |      |      |      |      |      |      |      |      |      |      |

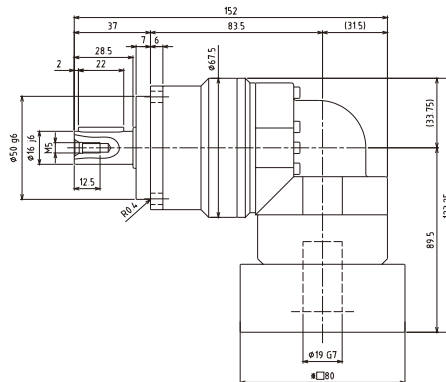
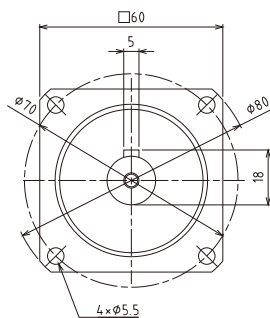
1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

## MPEB-060 Dimensions

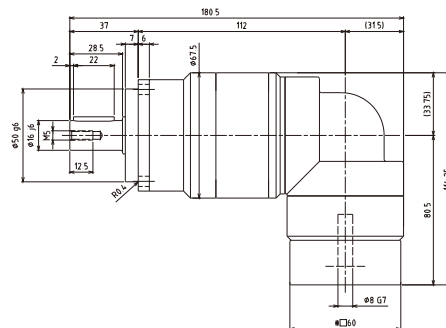
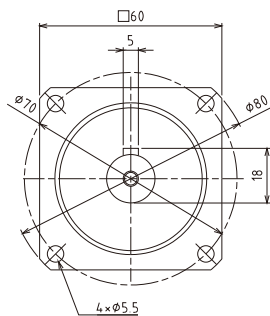
### MPEB-060-Single-stage reducer 14



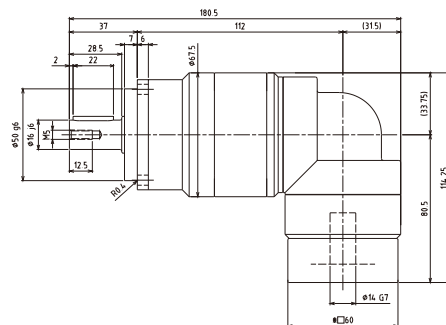
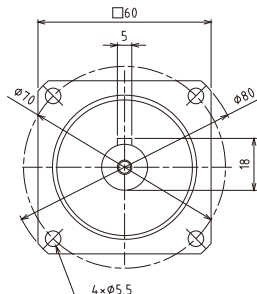
### MPEB-060-Single-stage reducer19



### MPEB-060-Double-stage reducer 8



### MPEB-060-Double-stage reducer 14



- (1) Please refer to the motor shaft diameter size
- (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
- (3) Reducer input size depends on the flange surface of the motor.

\* If no suitable size is available, please contact DR Drive.

# MPEB SERIES

## Specification

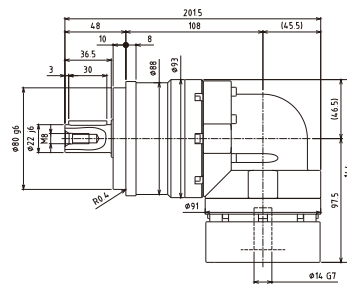
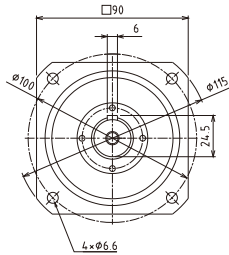
| MPEB-090                 |     |                    |                   | Single-stage           |      |      |      |      |      |      | Double-stage |      |      |      |      |      |      |     |      |      |      |      |      |
|--------------------------|-----|--------------------|-------------------|------------------------|------|------|------|------|------|------|--------------|------|------|------|------|------|------|-----|------|------|------|------|------|
| Ratio                    |     | i                  |                   | 3                      | 4    | 5    | 6    | 7    | 8    | 9    | 10           | 15   | 16   | 20   | 25   | 30   | 35   | 40  | 50   | 70   | 100  |      |      |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 115                    | 125  | 140  | 125  | 125  | 105  | 90   | 90           | 125  | 125  | 90   | 140  | 115  | 125  | 125 | 140  | 125  | 90   |      |      |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 3000                   |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 6000                   |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤7                     |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 2350                   |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 1700                   |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Work efficiency          |     | η                  | %                 | 95                     |      |      |      |      |      |      |              |      |      | 90   |      |      |      |     |      |      |      |      |      |
| Working life             |     | Lh                 | h                 | 20000                  |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Weight                   |     | m                  | kg                | 5.5                    |      |      |      |      |      |      |              |      |      | 6.8  |      |      |      |     |      |      |      |      |      |
| Installation direction   |     |                    |                   | All direction          |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Operating temperature    |     | °C                 |                   | -10~90                 |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Lubrication / Oil        |     |                    |                   | Lubrication            |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Degree of protection     |     |                    |                   | IP65                   |      |      |      |      |      |      |              |      |      |      |      |      |      |     |      |      |      |      |      |
| Moment of inertia        | ≤14 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.28                   | 0.25 | 0.25 | 0.22 | 0.18 | 0.17 | 0.14 | 0.14         | 0.13 | 0.42 | 0.12 | 0.25 | 0.23 | 0.21 | 0.2 | 0.18 | 0.18 | 0.18 | 0.16 | 0.16 |
|                          | ≤19 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.65                   | 0.6  | 0.55 | 0.55 | 0.52 | 0.5  | 0.48 | 0.48         | 0.45 | 0.12 | 0.42 | 0.7  | 0.7  | 0.7  | 0.7 | 0.7  | 0.7  | 0.6  | 0.5  | 0.5  |
|                          | ≤24 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 0.74                   | 0.69 | 0.63 | 0.63 | 0.59 | 0.57 | 0.55 | 0.55         | 0.51 | 0.42 | 0.48 | 0.8  | 0.8  | 0.7  | 0.7 | 0.7  | 0.7  | 0.65 | 0.6  | 0.6  |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

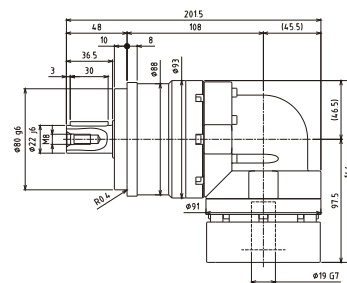
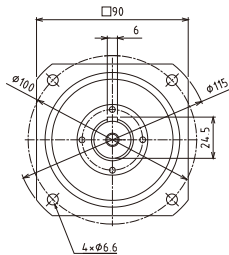
# MPEB SERIES

## MPEB-090 Dimensions

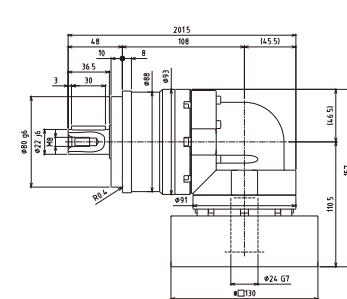
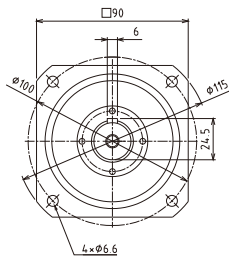
### MPEB-090-Single-stage reducer 14



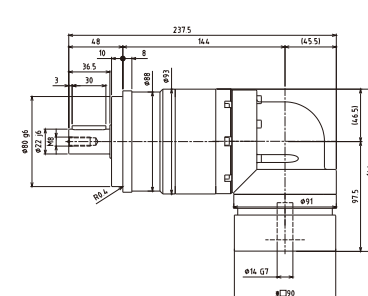
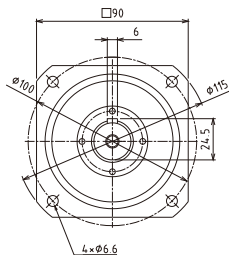
### MPEB-090-Single-stage reducer 19



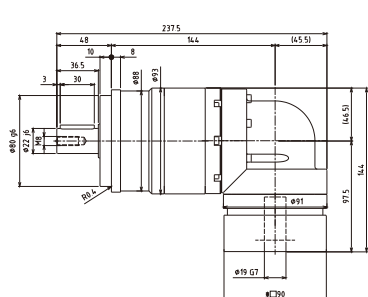
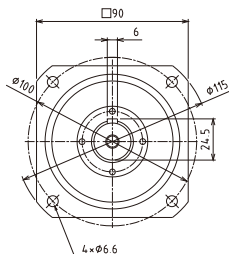
### MPEB-090-Single-stage reducer 24



### MPEB-090-Double-stage reducer 14



### MPEB-090-Double-stage reducer 19



- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPEB SERIES

## Specification

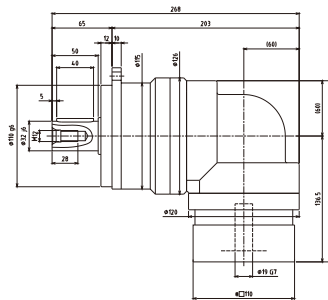
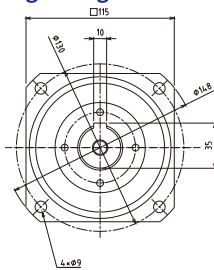
| MPEB-115                 |     |                    |                   | Single-stage           |      |     |     |     |     |     |     | Double-stage |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------|-----|--------------------|-------------------|------------------------|------|-----|-----|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ratio                    |     | i                  |                   | 3                      | 4    | 5   | 6   | 7   | 8   | 9   | 10  | 15           | 16  | 20  | 25  | 30  | 35  | 40  | 50  | 60  | 70  | 80  | 100 |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 185                    | 260  | 295 | 270 | 230 | 205 | 205 | 270 | 230          | 205 | 295 | 180 | 270 | 260 | 295 | 270 | 270 | 230 | 205 |     |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 3000                   |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 6000                   |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤7                     |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 5100                   |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 3900                   |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Work efficiency          |     | η                  | %                 | 95                     |      |     |     |     |     |     |     |              |     |     | 90  |     |     |     |     |     |     |     |     |
| Working life             |     | Lh                 | h                 | 20000                  |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Weight                   |     | m                  | kg                | 10.5                   |      |     |     |     |     |     |     |              |     |     | 9.7 |     |     |     |     |     |     |     |     |
| Installation direction   |     |                    |                   | All direction          |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Operating temperature    |     | °C                 |                   | -10~90                 |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Lubrication / Oil        |     |                    |                   | Lubrication            |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Degree of protection     |     |                    |                   | IP65                   |      |     |     |     |     |     |     |              |     |     |     |     |     |     |     |     |     |     |     |
| Moment of inertia        | ≤19 | J <sub>1</sub>     | Kgcm              | 3.5                    | 3    | 2.6 | 2.2 | 2   | 1.8 | 1.6 | 1.5 | 1.5          | 1.5 | 1.4 | 1.3 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.5 | 0.5 |     |
|                          | ≤24 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 4.8                    | 4.6  | 4.5 | 4   | 3.5 | 3   | 2.7 | 2.5 | 2.5          | 2.5 | 2.3 | 2.1 | 2.2 | 2.1 | 2.1 | 2   | 1.9 | 1.8 | 1.8 | 1.7 |
|                          | ≤35 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 11.5                   | 10.5 | 10  | 10  | 9.9 | 9.9 | 9.6 | 9.5 | 9.5          | 9   | 9   | 8.5 |     |     |     |     |     |     |     |     |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

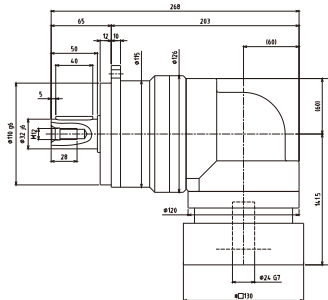
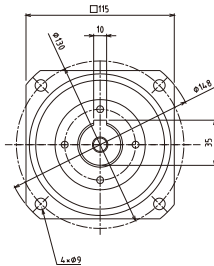
# MPEB SERIES

## MPEB-115 Dimensions

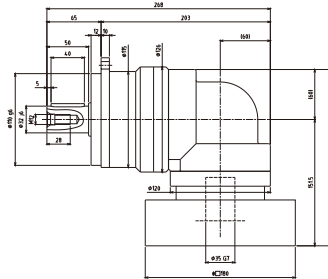
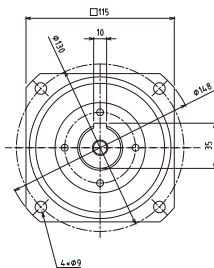
### MPEB-115-Single-stage reducer 19



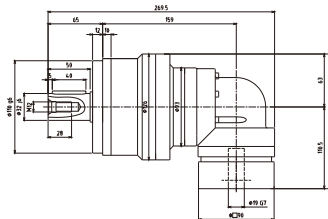
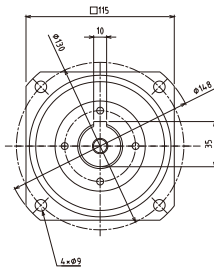
### MPEB-115-Single-stage reducer 24



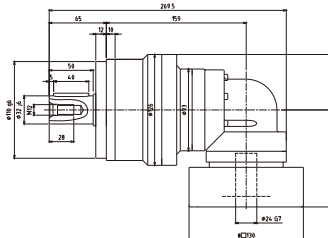
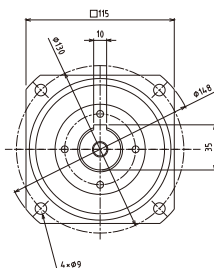
### MPEB-115-Single-stage reducer 35



### MPEB-115-Double-stage reducer 19



### MPEB-115-Double-stage reducer 24



- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPEB SERIES

## Specification

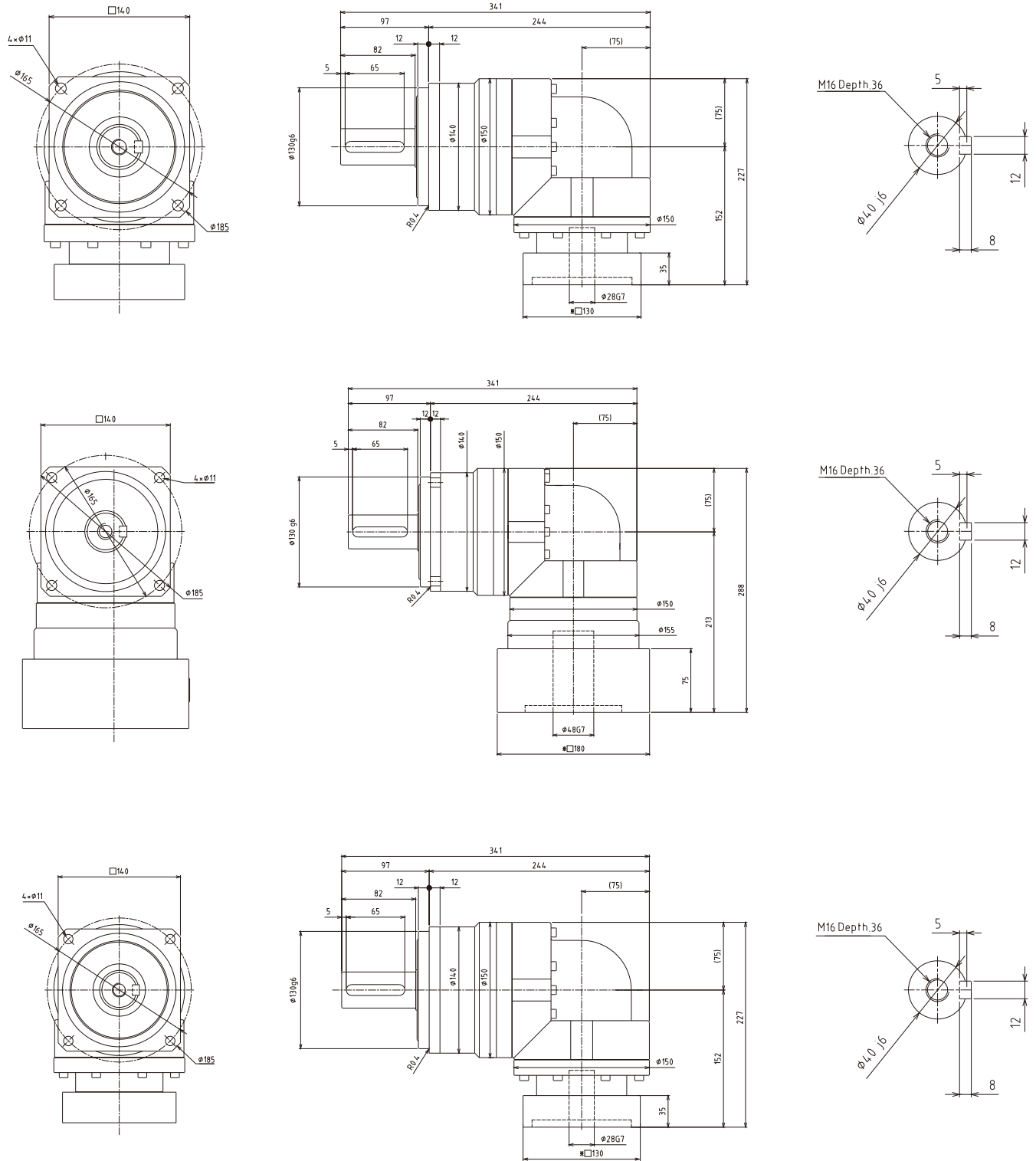
| MPEB-140                 |     |                    |                   | Single-stage           |       |       |       |       |       |       | Double-stage |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|-----|--------------------|-------------------|------------------------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Ratio                    |     | i                  |                   | 3                      | 4     | 5     | 6     | 7     | 8     | 9     | 10           | 15    | 16    | 20    | 25    | 30    | 35    | 40    | 50    | 70    | 100   |       |       |       |       |       |
| Rated output torque      |     | T <sub>2N</sub>    | Nm                | 320                    | 320   | 485   | 485   | 485   | 485   | 320   | 320          | 320   | 485   | 485   | 485   | 320   | 485   | 485   | 485   | 485   | 320   |       |       |       |       |       |
| Emergency braking torque |     | T <sub>2NOT</sub>  | Nm                | Rated Output Torque ×3 |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Rated input speed        |     | n <sub>1N</sub>    | rpm               | 2000                   |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Maximum input speed      |     | n <sub>1max</sub>  | rpm               | 4000                   |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Backlash                 |     | j <sub>t</sub>     | Arcmin            | ≤7                     |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Maximum radial force     |     | F <sub>2RMax</sub> | N                 | 8100                   |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Maximum axial force      |     | F <sub>2AMax</sub> | N                 | 8200                   |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Work efficiency          |     | η                  | %                 | 95                     |       |       |       |       |       |       |              |       |       | 90    |       |       |       |       |       |       |       |       |       |       |       |       |
| Working life             |     | Lh                 | h                 | 20000                  |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Weight                   |     | m                  | kg                | 19.1                   |       |       |       |       |       |       |              |       |       | 19.6  |       |       |       |       |       |       |       |       |       |       |       |       |
| Installation direction   |     |                    |                   | All direction          |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Operating temperature    |     | ℃                  |                   | -10~90                 |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Lubrication / Oil        |     |                    |                   | Lubrication            |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Degree of protection     |     |                    |                   | IP65                   |       |       |       |       |       |       |              |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Moment of inertia        | ≤19 | J <sub>1</sub>     | Kgcm <sup>2</sup> |                        |       |       |       |       |       |       |              | 6.4   | 7.29  | 6.22  | 6.15  | 7.09  | 4.99  | 6.09  | 4.95  | 6.07  | 4.93  | 4.92  | 4.91  | 4.91  | 4.91  | 4.91  |
|                          | ≤28 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 23.13                  | 18.57 | 16.91 | 16.01 | 15.58 | 15.23 | 14.77 | 14.66        | 8     | 8.88  | 7.81  | 7.75  | 8.86  | 6.58  | 7.69  | 6.54  | 7.66  | 6.52  | 6.51  | 6.51  | 6.5   | 6.5   | 6.5   |
|                          | ≤38 | J <sub>1</sub>     | Kgcm              | 27.5                   | 22.94 | 21.28 | 20.38 | 19.95 | 19.61 | 19.41 | 19.03        | 15.07 | 15.96 | 14.89 | 14.82 | 15.76 | 13.66 | 14.76 | 13.61 | 14.74 | 13.59 | 13.58 | 13.58 | 13.58 | 13.57 | 13.57 |
|                          | ≤48 | J <sub>1</sub>     | Kgcm <sup>2</sup> | 40.73                  | 36.17 | 34.51 | 33.61 | 33.18 | 32.84 | 32.37 | 32.26        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

1. If you need a different ratio, please contact DR Drive
2. Center point of the output shaft.
3. The service life is 10,000h during continuous operation
4. Please contact DR Drive for special temperature requirements

# MPEB SERIES

## MPEB-140 Dimensions

### Single-stage

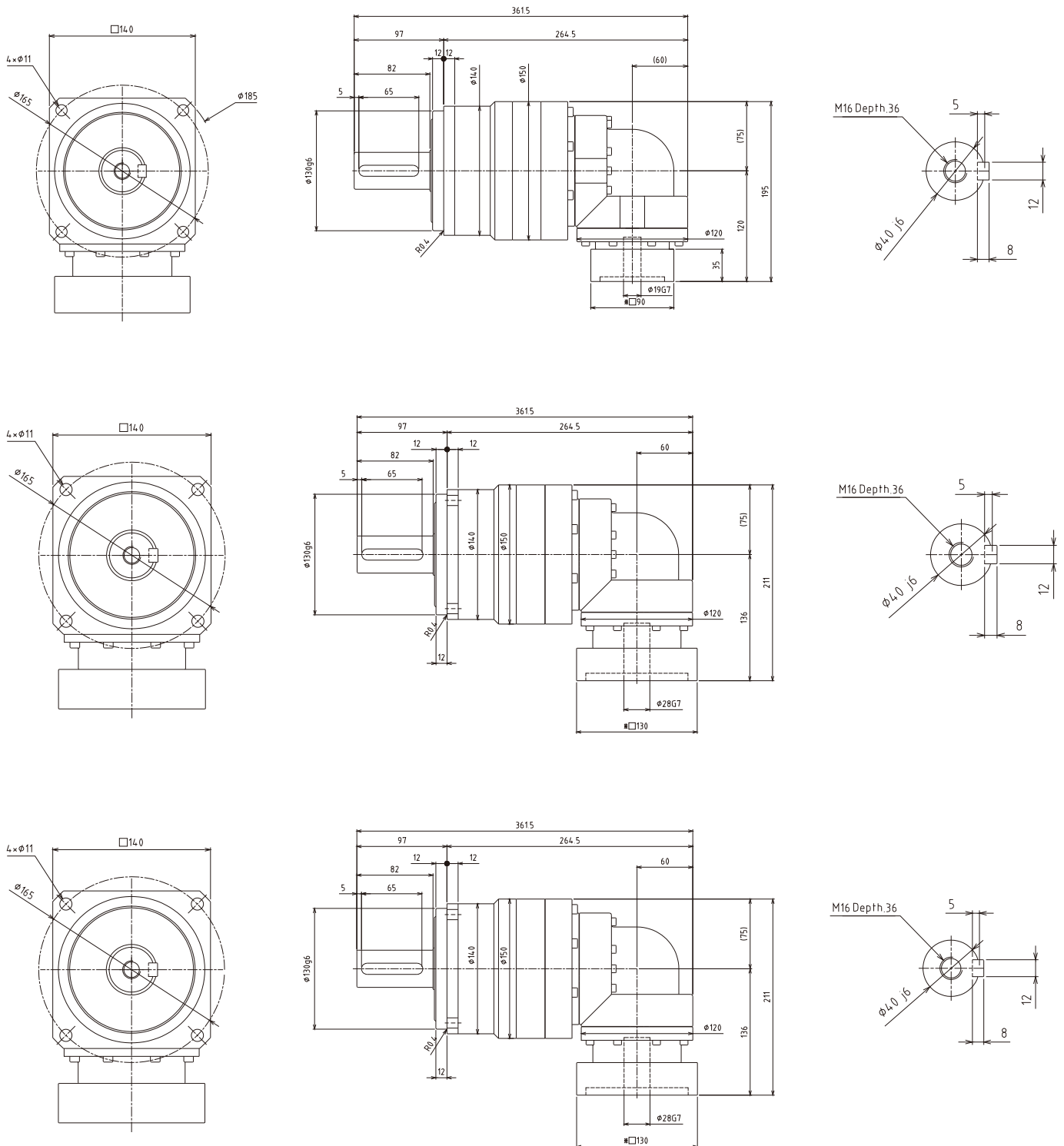


- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPEB SERIES

## MPEB-140 Dimensions

### Double-stage



- (1) Please refer to the motor shaft diameter size
  - (2) Motor shaft length, for special motor shaft size, please contact DR Drive.
  - (3) Reducer input size depends on the flange surface of the motor.
- \* If no suitable size is available, please contact DR Drive.

# MPB/MPEB SERIES

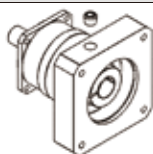
## Installation steps

### 1 Motor Installation Steps

1 Wipe off the anti-rust agent and oil from the motor shaft.

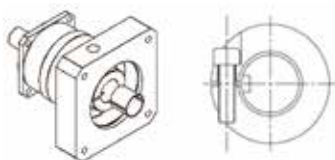


2 Remove the plug.



3 Turn the input shaft so that the head of the fastening bolt fits into the plug hole. Make sure that the fastening bolt is loosened at this time.

In case the bushing has been attached, please fix it to the reducer as shown in the drawing below.



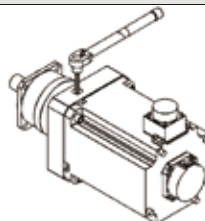
4 Please place reducer vertically on the flat surface so the motor mounting part faces up. Carefully insert the motor shaft into the input shaft. (It should be inserted smoothly) Make sure the motor flange is perfectly fit to the reducer's flange. Tighten the motor installation bolts to the proper torque. (See Table 1)



### 2 Reducer installation

After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque.(See table2)

5 Tighten the clamping bolt of the input shaft to the proper torque using a torque wrench. (See table 1)



6 Reinstall the plug. The procedure has been completed.

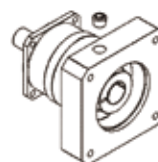


Table 1. Bolt Tightening Torque

| Bolt size | Motor installing bolts |      | Clamping bolt |      |
|-----------|------------------------|------|---------------|------|
|           | Nm                     | kgfm | Nm            | kgfm |
| M3        | 1.1                    | 0.11 | 1.9           | 0.18 |
| M4        | 2.5                    | 0.26 | 4.3           | 0.44 |
| M5        | 5.1                    | 0.52 | 8.7           | 0.89 |
| M6        | 8.7                    | 0.89 | 15            | 1.5  |
| M8        | 21                     | 2.1  | 36            | 3.7  |
| M10       | 42                     | 4.3  | 71            | 7.2  |
| M12       | 72                     | 7.3  | 125           | 13   |
| M16       | 134                    | 14   | —             | —    |

Table 2

| Bolt size | Tightening torque |      |
|-----------|-------------------|------|
|           | Nm                | kgfm |
| M3        | 1.9               | 0.18 |
| M4        | 4.3               | 0.44 |
| M5        | 8.7               | 0.89 |
| M6        | 15                | 1.5  |
| M8        | 36                | 3.7  |
| M10       | 71                | 7.2  |
| M12       | 125               | 13   |
| M16       | 310               | 32   |
| M20       | 603               | 62   |

※ Recommended bolt: Strength 12.9 or higher

# MPB/MPEB SERIES

## Security Considerations

### Cautions for storage

#### Whenever temporarily storing the product, follow these directions:

1. Keep in a clean and dry place.
2. If you need to store it in an outdoor moist place, be sure to place it in a box and tightly wrap it with vinyl or a similar material. So that it is protected from rain and outdoor air corrosion (such as condensation and rust), when in use.

### ■ Cautions for operation

#### ■ When the reducer is delivered to you . . .

When the product is delivered, please confirm that you have received the exact same model that you ordered.  
Please wipe off the input and output shaft of the reducer, which are coated with anti-corrosive oil.  
※ Please remove the rubber cap from the input shaft before wiping the shafts.  
※ Lubricant (grease) is already filled in the reducer.  
It is available as is.

#### ■ Setting & Installation

- Avoid using in an area where rain or water drops directly.
- If you plan to use the product outdoors or in an environment with dust and water drops, please seek advice beforehand.
- Install at 0°C~40°C of surrounding temperature.
- In case of using at temperatures outside the above-mentioned range, please contact the headquarters for consultation.
- Install the device on a stable stand without any vibrations, and fasten it with a bolt.
- Install with consideration for ease of repair and inspection.

#### ■ Precautions before starting the operation

- The reducer can be used soon after arrival, as it has already been filled with lubrication.
- During the initial operation, check the rotating direction of the output shaft and then gradually apply load.

#### ■ Cautions during operation

- Avoid overloading.
- The input speed must not exceed the specified speed.
- In the following cases, stop the operation and conduct an examination immediately.
  - If the temperature sharply increases
  - If an abnormal noise suddenly occurs
  - If the number of revolutions becomes unstable suddenly

- These issues may be caused by the following factors, so please respond promptly or contact us.
  - Is it under an overload condition?
  - Is the lubricant insufficient or deteriorated, or is a different type of lubricant being used?
  - Is the axis, gear, or motor side damaged?
  - Is the jointing with other machines poor?

#### ■ Disassembly

- The REDUCER is designed to prevent disassembly

#### ■ Warranty

- The warranty period is one year from the date of product delivery.

#### ■ Lubricant use

- The reducer in all models is of the grease-seal type.
- A specified amount of grease is filled at the factory before release, so you can use it as soon as it is delivered to you.
- It is impossible to exchange grease.
- If you are using it in an environment outside the range of 0°C~40°C, please contact us beforehand.

#### ■ Daily check points

- Is the temperature of the reducer case excessively high during operation? (Temperatures up to +50°C are not significant.)
- Is there an abnormal noise coming from the bearing, gear, etc.?
- Is there any abnormal vibration in the reducer?
- \* In the event of an abnormal phenomenon, please stop the operation immediately and contact us.
- Is there a lubricant leak?
- \* If you experience an oil leak, please contact us.

#### ■ Periodic check points

- Are there any overload or abnormal rotations?
- Are free, sprocket, and reducer assembling bolts loose?
- Is there an abnormal condition in the electric system?
- Inspection and maintenance of key parts.
- \* In the event of an abnormal condition, please stop the operation immediately and contact us.
- Oil leak
- \* If you experience an oil leak, please contact us.

#### ■ Scrapping

- Whenever scrapping the REDUCER, classify the parts by material into industrial wastes as specified in the laws and regulations of self-governing bodies.

Material of parts can be divided into four categories:

- ① Rubber parts: Oil seal, seat packing, rubber cap, and seal used for bearing on the motor flange, etc.
- ② Aluminum parts: Motor flange and output shaft holder
- ③ Grease: The grease adhered to the parts should be wiped off with a dry cloth or a similar material and disposed of properly with the oil. It should be disposed of as oil.
- ④ Iron parts: Parts other than those mentioned above.

### WARRANTY PROVISION

The warranty only covers the delivered product.

#### ■ THE EXPENSES AND LOSSES MENTIONED BELOW ARE NOT INCLUDED IN THE WARRANTY.

- ① The cost of transportation for repairing our products.
- ② The fee for the removal operation, reinstallation, and other related operations in case our product is installed on another machine.
- ③ The loss of opportunities for use and indirect damages caused by service interruptions resulting from defects in our product.
- ④ All other secondary expenses and losses.



[www.drdrive.kr](http://www.drdrive.kr)



**DR DRIVE CO., Ltd.**

---

407 Venture-dong, 22, Changwon-daero 18beon-gil, Uichang-gu, Changwon-si, Gyeongsangnam-do, Republic of Korea

**Tel.** +82-55-252-8838 | **Fax.** +82-55-256-8838 | **Web.** [www.drdrive.kr](http://www.drdrive.kr) | **Email.** [dr@drdrive.kr](mailto:dr@drdrive.kr)