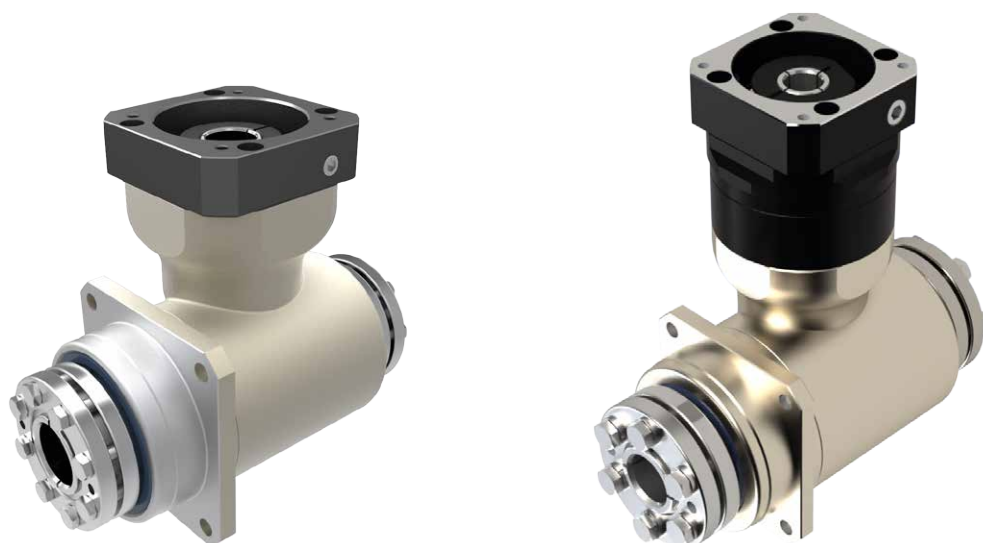


# HF series

## Indication of Model Numbers

| HF   | 60                            | F  | O  | B                                    | 3   | P0                         |
|------|-------------------------------|--|--|--------------------------------------|---|----------------------------|
| Type | Model                         | Input  | Output   | Bearing                              | Ratio   | Backlash Class             |
| HF   | 60<br>75<br>100<br>140<br>180 | F : Input Flange<br>R44: Reducer<br>1-Stage:<br>R44 · R62... | O: Hollow Output Shaft<br>N: Single Clamping<br>(Keyway)<br>N1: Single Clamping<br>(No Keyway)<br>M: Double Clamping<br>S: Single Output Shaft<br>(Keyway)<br>S1: Single Output Shaft<br>(No Keyway) | B : Ball Bearing<br>T: Taper Bearing | 1-Stage<br>5, 10, 15<br><br>-----<br>With 1-Stage<br>Planetary<br>Reducer<br>25 ~ 150 | P0 ≤ 3<br>P1 ≤ 6<br>P2 ≤ 9 |



# Characteristic of HF Series

HF

## 1-Stage

| Parameter                                   | Code       | Unit   | Ratio | 60   | 75    | 100    | 140    | 180    |
|---|------------|--------|-------|--|-------|--------|--------|--------|
| Rated Output Torque (Nominal Output Torque) | $T_{2N}$   | Nm     | 5     | 30   | 35    | 70     | 260    | 720    |
|   |            |        | 10    | 25   | 30    | 60     | 220    | 615    |
|   |            |        | 15    | 20   | 25    | 50     | 180    | 510    |
| Max. Acceleration Torque                    | $T_{2B}$   | Nm     | 5~15  | 1.5 Times of Rated Output Torque                                   |       |        |        |        |
| Max. Output Torque<br>Emergency Stop Torque | $T_{2NOT}$ | Nm     | 5~15  | 3 Times of Rated Output Torque                                     |       |        |        |        |
| Rated Input Speed                           | $n_{1N}$   | rpm    | 5~15  | 3,000  | 2,800 | 2,700  | 2,000  | 2,000  |
| Max. Input Speed                            | $n_{1B}$   | rpm    | 5~15  | 6,000  | 5,000 | 4,000  | 3,000  | 3,000  |
| Backlash                                    | $J_t$      | arcmin | P0    | ≤ 3  | ≤ 3   | ≤ 3    | ≤ 3    | ≤ 3    |
|   |            |        | P1    | ≤ 6  | ≤ 6   | ≤ 6    | ≤ 6    | ≤ 6    |
|   |            |        | P2    | ≤ 9  | ≤ 9   | ≤ 9    | ≤ 9    | ≤ 9    |
| Max. Radial Force<br>Ball Bearing           | $F_{2rB}$  | N      | 5~15  | 1,040  | 1,495 | 2,366  | 5,837  | 7,020  |
| Max. Axial Force<br>Ball Bearing            | $F_{2aB}$  | N      | 5~15  | 520  | 748   | 1,183  | 2,919  | 3,510  |
| Max. Radial Force<br>Taper Bearing          | $F_{2rB}$  | N      | 5~15  | 3,370  | 6,920 | 11,300 | 17,300 | 20,200 |
| Max. Axial Force<br>Taper Bearing           | $F_{2aB}$  | N      | 5~15  | 1,685  | 2,460 | 5,650  | 8,650  | 10,100 |
| Service Life                                | $L_H$      | hr     | 5~15  | S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs) |       |        |        |        |
| Efficiency                                  | $\eta$     | %      | 5·10  | ≥ 96%  |       |        |        |        |
|   |            |        | 15    | ≥ 93%  |       |        |        |        |
| Operating Temperature                       |            | °C     | 5~15  | -10°C ~ +90°C  |       |        |        |        |
| Lubrication                                 |            |        | 5~15  | Synthetic Oil  |       |        |        |        |
| Noise Level                                 |            | dB     | 5~15  | ≤ 66   | ≤ 66  | ≤ 66   | ≤ 68   | ≤ 70   |

### Mass Moments of Inertia (kgcm<sup>2</sup>)

| Ratio | 60   | 75   | 100  | 140  | 180  |
|-------|------|------|------|------|------|
| 5~15  | 0.03 | 0.13 | 0.78 | 6.74 | 5.78 |

# Characteristic of HF Series

## 2-Stage

| Parameter                                   | Code       | Unit   | Ratio          | 60   | 75    | 100    | 140    | 180    |
|---|------------|--------|----------------|--|-------|--------|--------|--------|
| Rated Output Torque (Nominal Output Torque) | $T_{2N}$   | Nm     | 25 · 50        | 30   | 35    | 70     | 260    | 720    |
|   |            |        | 100            | 25   | 30    | 60     | 220    | 615    |
|   |            |        | 75 · 150       | 20   | 25    | 50     | 180    | 510    |
| Max. Acceleration Torque                    | $T_{2B}$   | Nm     | 25~150         | 1.5 Times of Rated Output Torque                                   |       |        |        |        |
| Max. Output Torque<br>Emergency Stop Torque | $T_{2NOT}$ | Nm     | 25~150         | 3 Times of Rated Output Torque                                     |       |        |        |        |
| Rated Input Speed                           | $n_{1N}$   | rpm    | 25~150         | 5,500  | 4,500 | 4,200  | 3,900  | 3,400  |
| Max. Input Speed                            | $n_{1B}$   | rpm    | 25~150         | 6,000  | 5,000 | 4,000  | 3,000  | 3,000  |
| Backlash                                    | $J_t$      | arcmin | P0             | ≤ 4  | ≤ 4   | ≤ 4    | ≤ 4    | ≤ 4    |
|   |            |        | P1             | ≤ 7  | ≤ 7   | ≤ 7    | ≤ 7    | ≤ 7    |
|   |            |        | P2             | ≤ 10   | ≤ 10  | ≤ 10   | ≤ 10   | ≤ 10   |
| Max. Radial Force<br>Ball Bearing           | $F_{2rB}$  | N      | 25~150         | 1,040  | 1,495 | 2,366  | 5,837  | 7,020  |
| Max. Axial Force<br>Ball Bearing            | $F_{2aB}$  | N      | 25~150         | 520  | 748   | 1,183  | 2,919  | 3,510  |
| Max. Radial Force<br>Taper Bearing          | $F_{2rB}$  | N      | 25~150         | 3,370  | 6,920 | 11,300 | 17,300 | 20,200 |
| Max. Axial Force<br>Taper Bearing           | $F_{2aB}$  | N      | 25~150         | 1,685  | 2,460 | 5,650  | 8,650  | 10,100 |
| Service Life                                | $L_H$      | hr     | 25~150         | S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs) |       |        |        |        |
| Efficiency                                  | $\eta$     | %      | 25 · 50        | ≥ 92%  |       |        |        |        |
|   |            |        | 75 · 100 · 150 | ≥ 90%  |       |        |        |        |
| Operating Temperature                       |            | °C     | 25~150         | -10°C ~ +90°C  |       |        |        |        |
| Lubrication                                 |            |        | 25~150         | Synthetic Oil  |       |        |        |        |
| Noise Level                                 |            | dB     | 25~150         | ≤ 66   | ≤ 66  | ≤ 66   | ≤ 68   | ≤ 70   |

## Mass Moments of Inertia (kgcm<sup>2</sup>)

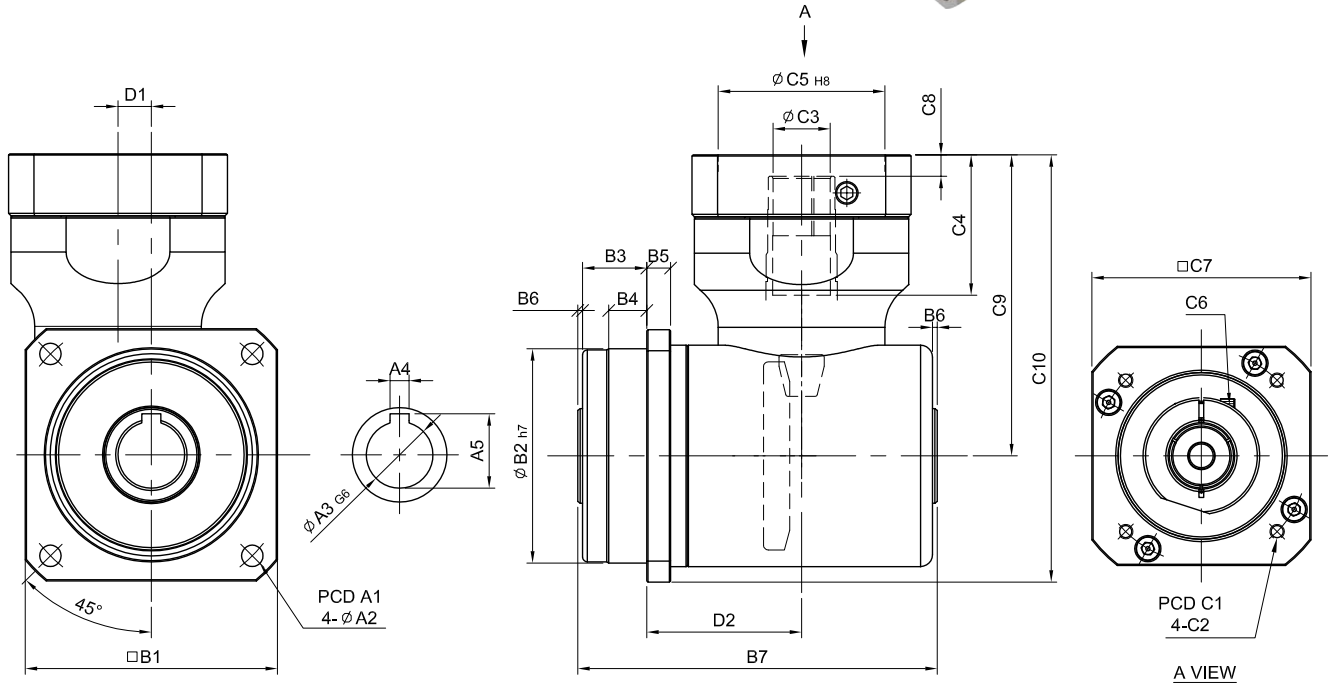
| Ratio  | 60   | 75   | 100  | 140  | 180  |
|--------|------|------|------|------|------|
| 25~150 | 0.04 | 0.13 | 0.13 | 0.47 | 2.71 |

# HF-FO series

RATIO : 5.10.15 (1-Stage)



Input Flange - Hollow Output Shaft



unit: mm

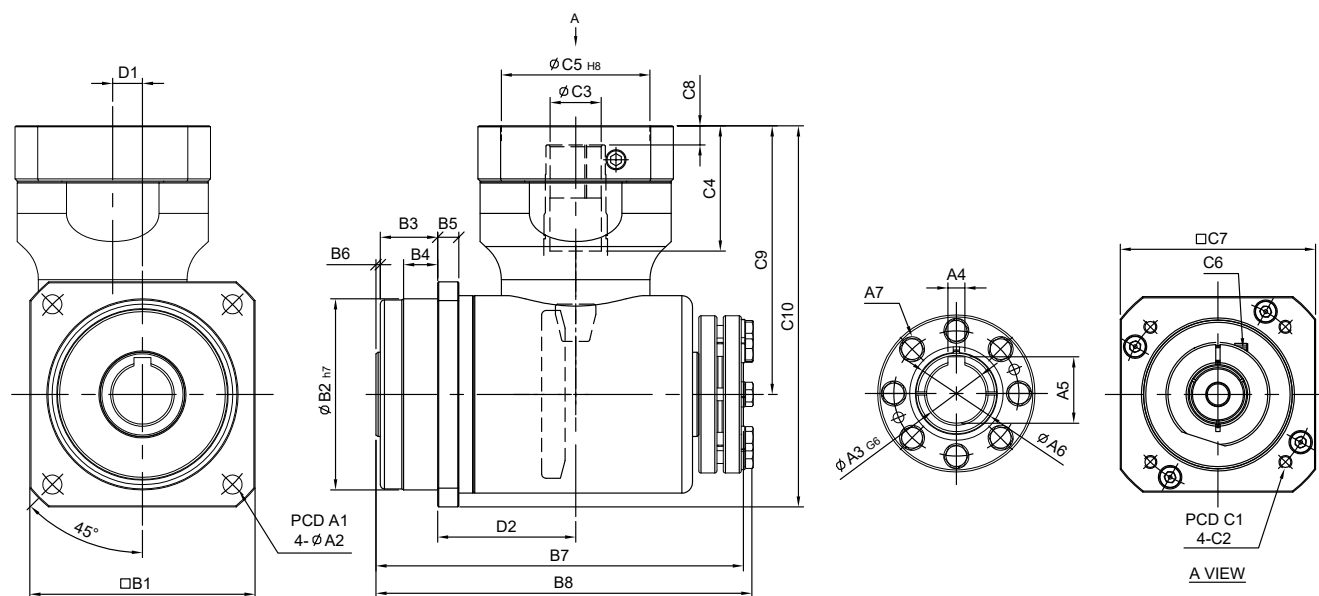
| Model Code      | 60  | 75           | 100          | 140                  | 180             |                 |
|-----------------|-----|--------------|--------------|----------------------|-----------------|-----------------|
| <b>A</b>        | A1  | 68           | 85           | 120                  | 165             | 215             |
|                 | A2  | 5.5          | 6.5          | 9                    | 11              | 13              |
|                 | A3  | 15           | 20           | 28                   | 40              | 55              |
|                 | A4  | 4            | 5            | 8                    | 12              | 14              |
|                 | A5  | 16.7         | 22.3         | 31.3                 | 43.3            | 58.8            |
| <b>B</b>        | B1  | 62           | 76           | 106                  | 142             | 190             |
|                 | B2  | 60           | 70           | 90                   | 130             | 160             |
|                 | B3  | 18           | 18           | 27                   | 27              | 26              |
|                 | B4  | 11           | 12           | 16                   | 15.5            | 15.5            |
|                 | B5  | 6            | 7            | 10                   | 12              | 15              |
|                 | B6  | 2            | 2            | 2                    | 3               | 3               |
|                 | B7  | 103          | 113          | 151                  | 193             | 247             |
| <b>C</b>        | C1  | 46 · 60 · 63 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 |
|                 | C2  | M3 · M4 · M5 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  |
|                 | C3  | 11           | 14           | 24                   | 35              | 42              |
|                 | C4  | 26           | 33           | 59                   | 82              | 84.5            |
|                 | C5  | 30 · 40 · 50 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 |
|                 | C6  | M4 x P0.7    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      |
|                 | C7  | 46 · 55      | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 |
|                 | C8  | 5            | 6            | 9                    | 10              | 10              |
|                 | C9  | 69           | 95.5         | 126.5                | 179             | 228             |
|                 | C10 | 100          | 133.5        | 179.5                | 250             | 323             |
| <b>D</b>        | D1  | 9            | 9            | 14                   | 23              | 32              |
|                 | D2  | 41.5         | 48           | 65                   | 90              | 125             |
| Weight ±3% (kg) |     |              | 2.31         |                      |                 |                 |

# HF-FN series

RATIO : 5.10.15 (1-Stage)



Input Flange - Single Clamping



unit: mm

| Model Code | 60  | 75           | 100          | 140                  | 180             |                 |
|------------|-----|--------------|--------------|----------------------|-----------------|-----------------|
| <b>A</b>   | A1  | 68           | 85           | 120                  | 165             | 215             |
|            | A2  | 5.5          | 6.5          | 9                    | 11              | 13              |
|            | A3  | 15           | 20           | 28                   | 40              | 55              |
|            | A4  | 4            | 5            | 8                    | 12              | 14              |
|            | A5  | 16.7         | 22.3         | 31.3                 | 43.3            | 58.8            |
|            | A6  | 22           | 28           | 38                   | 52              | 73              |
|            | A7  | 6-M6         | 6-M6         | 8-M6                 | 8-M8            | 8-M8            |
| <b>B</b>   | B1  | 62           | 76           | 106                  | 142             | 190             |
|            | B2  | 60           | 70           | 90                   | 130             | 160             |
|            | B3  | 18           | 18           | 27                   | 27              | 26              |
|            | B4  | 11           | 12           | 16                   | 15.5            | 15.5            |
|            | B5  | 6            | 7            | 10                   | 12              | 15              |
|            | B6  | 2            | 2            | 2                    | 3               | 3               |
|            | B7  | 123.5        | 134          | 173                  | 223             | 279             |
|            | B8  | 127          | 138          | 177                  | 229             | 284             |
| <b>C</b>   | C1  | 46 · 60 · 63 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 |
|            | C2  | M3 · M4 · M5 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  |
|            | C3  | 11           | 14           | 24                   | 35              | 42              |
|            | C4  | 26           | 33           | 59                   | 82              | 84.5            |
|            | C5  | 30 · 40 · 50 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 |
|            | C6  | M4 x P0.7    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      |
|            | C7  | 46 · 55      | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 |
|            | C8  | 5            | 6            | 9                    | 10              | 10              |
|            | C9  | 69           | 95.5         | 126.5                | 179             | 228             |
|            | C10 | 100          | 133.5        | 179.5                | 250             | 323             |
| <b>D</b>   | D1  | 9            | 9            | 14                   | 23              | 32              |
|            | D2  | 41.5         | 48           | 65                   | 90              | 125             |

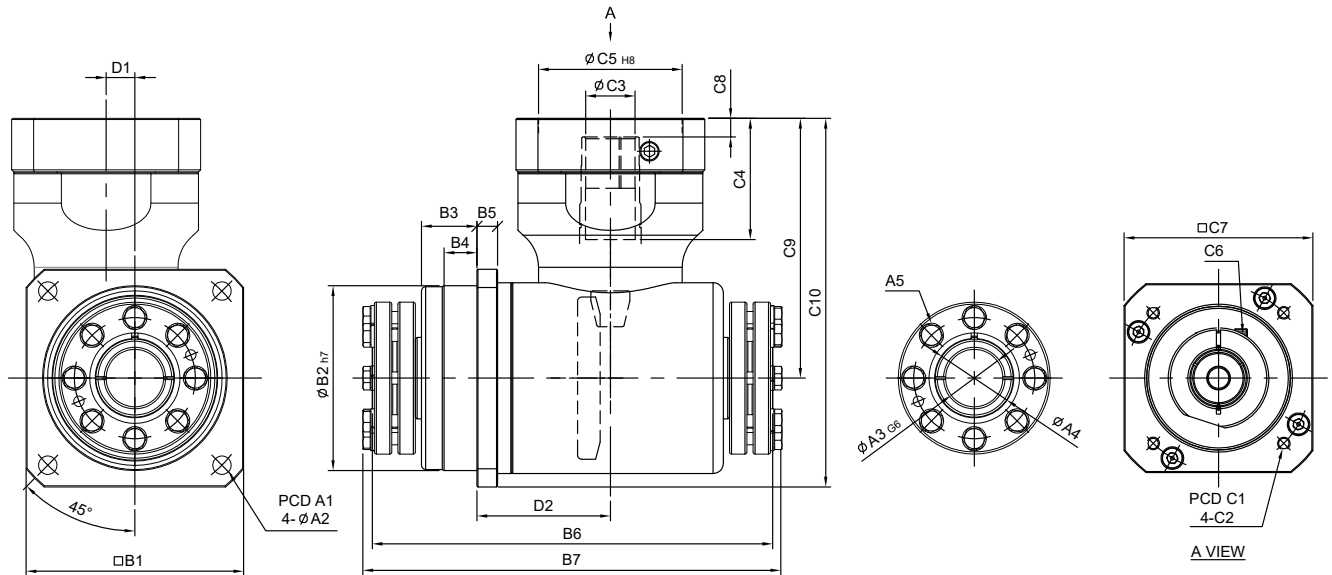
Weight ±3% (kg)

# HF-FM series

RATIO : 5.10.15 (1-Stage)



Input Flange - Double Clamping



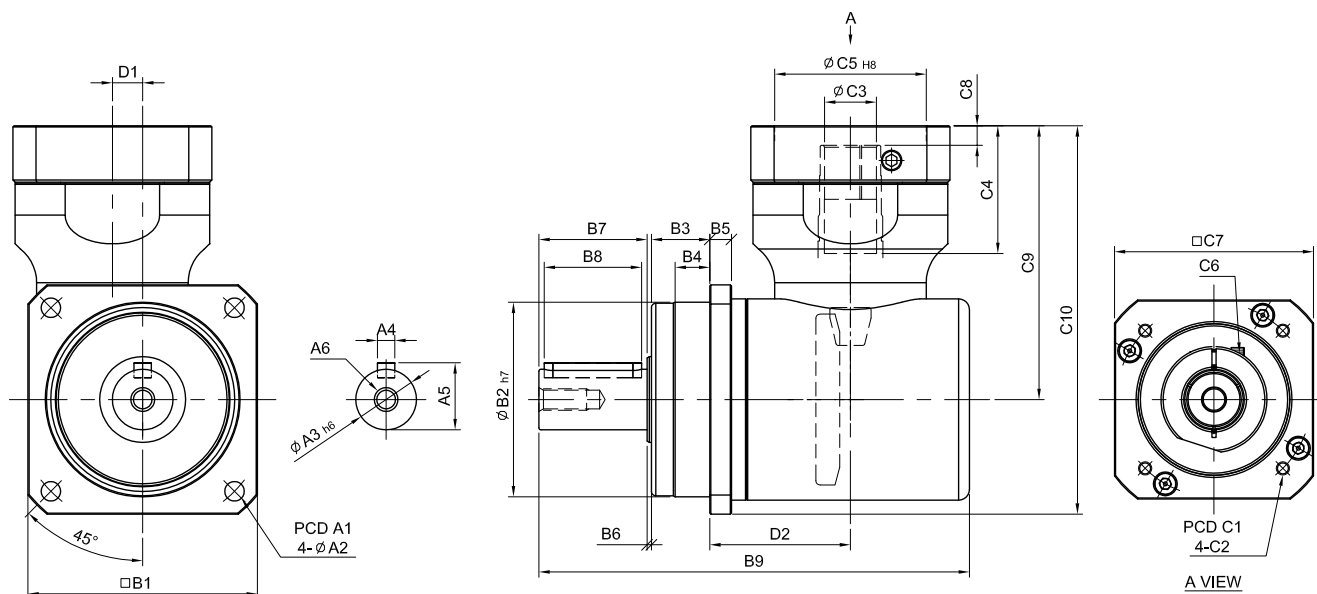
unit: mm

|                 | Model Code | 60           | 75           | 100                  | 140             | 180             |
|-----------------|------------|--------------|--------------|----------------------|-----------------|-----------------|
|                 |            | <b>A</b>     | A1           | 68                   | 85              | 120             |
|                 | A2         | 5.5          | 6.5          | 9                    | 11              | 13              |
|                 | A3         | 15           | 20           | 28                   | 40              | 55              |
|                 | A4         | 22           | 28           | 38                   | 52              | 73              |
|                 | A5         | 6-M6         | 6-M6         | 8-M6                 | 8-M8            | 8-M8            |
| <b>B</b>        | B1         | 62           | 76           | 106                  | 142             | 190             |
|                 | B2         | 60           | 70           | 90                   | 130             | 160             |
|                 | B3         | 18           | 18           | 27                   | 27              | 26              |
|                 | B4         | 11           | 12           | 16                   | 15.5            | 15.5            |
|                 | B5         | 6            | 7            | 10                   | 12              | 15              |
|                 | B6         | 144          | 155          | 195                  | 253             | 311             |
|                 | B7         | 153          | 162          | 202                  | 264             | 320             |
| <b>C</b>        | C1         | 46 · 60 · 63 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 |
|                 | C2         | M3 · M4 · M5 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  |
|                 | C3         | 11           | 14           | 24                   | 35              | 42              |
|                 | C4         | 26           | 33           | 59                   | 82              | 84.5            |
|                 | C5         | 30 · 40 · 50 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 |
|                 | C6         | M4 x P0.7    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      |
|                 | C7         | 46 · 55      | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 |
|                 | C8         | 5            | 6            | 9                    | 10              | 10              |
|                 | C9         | 69           | 95.5         | 126.5                | 179             | 228             |
|                 | C10        | 100          | 133.5        | 179.5                | 250             | 323             |
| <b>D</b>        | D1         | 9            | 9            | 14                   | 23              | 32              |
|                 | D2         | 41.5         | 48           | 65                   | 90              | 125             |
| Weight ±3% (kg) |            |              |              | 5.94                 |                 |                 |

# HF-FS series

RATIO : 5.10.15 (1-Stage)

Input Flange - Single Output Shaft



unit: mm

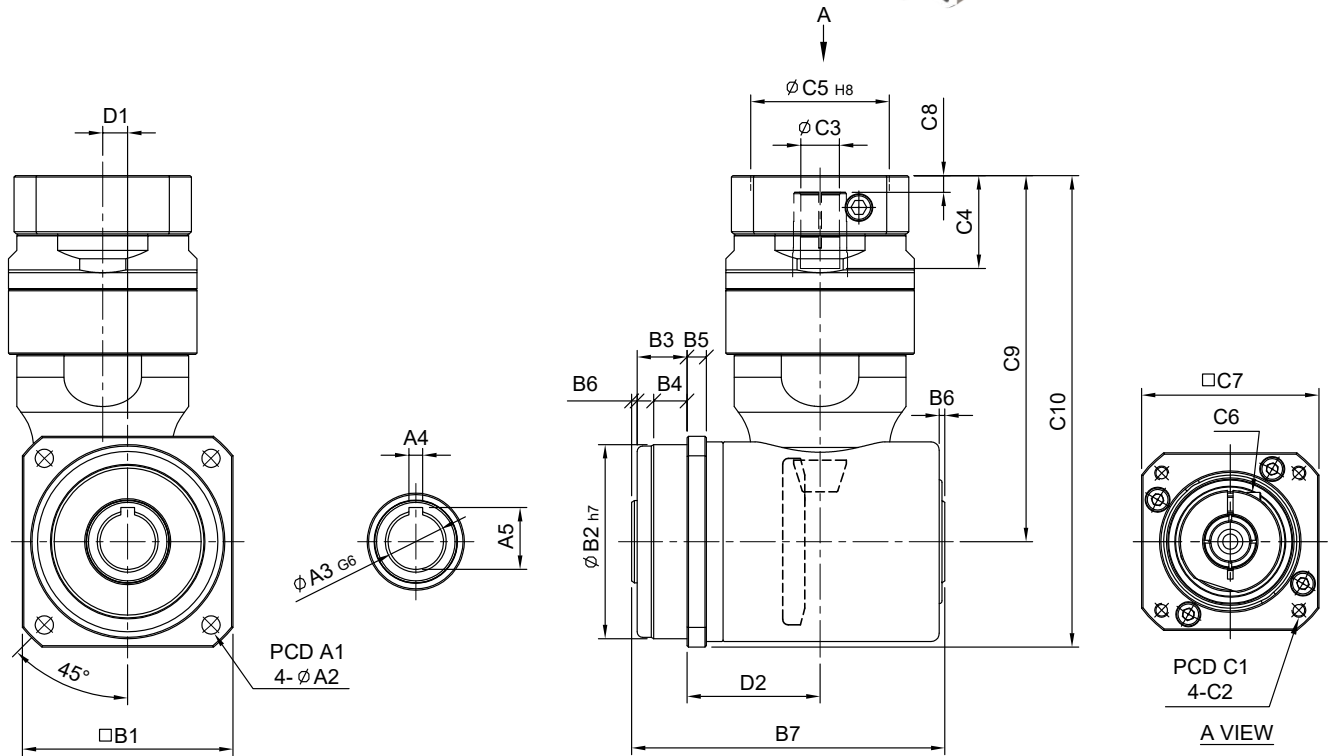
| Model Code      | 60  | 75           | 100          | 140                  | 180             |                 |
|-----------------|-----|--------------|--------------|----------------------|-----------------|-----------------|
| <b>A</b>        | A1  | 68           | 85           | 120                  | 165             | 215             |
|                 | A2  | 5.5          | 6.5          | 9                    | 11              | 13              |
|                 | A3  | 16           | 22           | 28                   | 40              | 55              |
|                 | A4  | 5            | 6            | 8                    | 12              | 16              |
|                 | A5  | 18           | 24.5         | 31                   | 43              | 59              |
|                 | A6  | M5 x P0.8    | M8 x P.125   | M10 x 1.5            | M12 x P1.75     | M16 x P20       |
| <b>B</b>        | B1  | 62           | 76           | 106                  | 142             | 190             |
|                 | B2  | 60           | 70           | 90                   | 130             | 160             |
|                 | B3  | 18           | 18           | 27                   | 27              | 26              |
|                 | B4  | 11           | 12           | 16                   | 15.5            | 15.5            |
|                 | B5  | 6            | 7            | 10                   | 12              | 15              |
|                 | B6  | 2            | 2            | 2                    | 3               | 3               |
|                 | B7  | 28           | 36           | 50                   | 70              | 82              |
|                 | B8  | 25           | 32           | 45                   | 60              | 70              |
|                 | B9  | 129          | 147          | 199                  | 260             | 326             |
| <b>C</b>        | C1  | 46 · 60 · 63 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 |
|                 | C2  | M3 · M4 · M5 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  |
|                 | C3  | 11           | 14           | 24                   | 35              | 42              |
|                 | C4  | 26           | 33           | 59                   | 82              | 84.5            |
|                 | C5  | 30 · 40 · 50 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 |
|                 | C6  | M4 x P0.7    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      |
|                 | C7  | 46 · 55      | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 |
|                 | C8  | 5            | 6            | 9                    | 10              | 10              |
|                 | C9  | 69           | 95.5         | 126.5                | 179             | 228             |
|                 | C10 | 100          | 133.5        | 179.5                | 250             | 323             |
| <b>D</b>        | D1  | 9            | 9            | 14                   | 23              | 32              |
|                 | D2  | 41.5         | 48           | 65                   | 90              | 125             |
| Weight ±3% (kg) |     | 1.58         |              | 5.9                  | 17.3            |                 |

# HF-RO series

RATIO : 25.50.75.100.150 (2-Stage)



Fitted with Planetary Reducer - Hollow Output Shaft



unit: mm

|          | Model | 60           | 75           | 100          | 140                  | 180               |
|----------|-------|--------------|--------------|--------------|----------------------|-------------------|
|          | Code  |              |              |              |                      |                   |
| <b>A</b> | A1    | 68           | 85           | 120          | 165                  | 215               |
|          | A2    | 5.5          | 6.5          | 9            | 11                   | 13                |
|          | A3    | 15           | 20           | 28           | 40                   | 55                |
|          | A4    | 4            | 5            | 8            | 12                   | 14                |
|          | A5    | 16.7         | 22.3         | 31.3         | 43.3                 | 58.8              |
| <b>B</b> | B1    | 62           | 76           | 106          | 142                  | 190               |
|          | B2    | 60           | 70           | 90           | 130                  | 160               |
|          | B3    | 18           | 18           | 27           | 27                   | 26                |
|          | B4    | 11           | 12           | 16           | 15.5                 | 15.5              |
|          | B5    | 6            | 7            | 10           | 12                   | 15                |
|          | B6    | 2            | 2            | 2            | 3                    | 3                 |
|          | B7    | 103          | 113          | 151          | 193                  | 247               |
| <b>C</b> | C1    | 46 · 60 · 63 | 70 · 75 · 90 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165   |
|          | C2    | M3 · M4 · M5 | M4 · M5 · M6 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10     |
|          | C3    | 8 · 9 · 11   | 11 · 14      | 11 · 14      | 16 · 19 · 22 · 24    | 22 · 24 · 28 · 32 |
|          | C4    | 26           | 33.5         | 33.5         | 59.2                 | 67.5              |
|          | C5    | 30 · 40 · 50 | 50 · 60 · 70 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130    |
|          | C6    | M4 x P0.7    | M5 x P0.8    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25        |
|          | C7    | 46 · 55      | 64 · 70 · 80 | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150   |
|          | C8    | 5            | 6            | 6            | 9.2                  | 10.5              |
|          | C9    | 98           | 132          | 155          | 220                  | 278.5             |
|          | C10   | 129          | 170          | 208          | 294.5                | 382.5             |
| <b>D</b> | D1    | 9            | 9            | 14           | 23                   | 32                |
|          | D2    | 41.5         | 48           | 65           | 90                   | 125               |

Weight ±3% (kg)

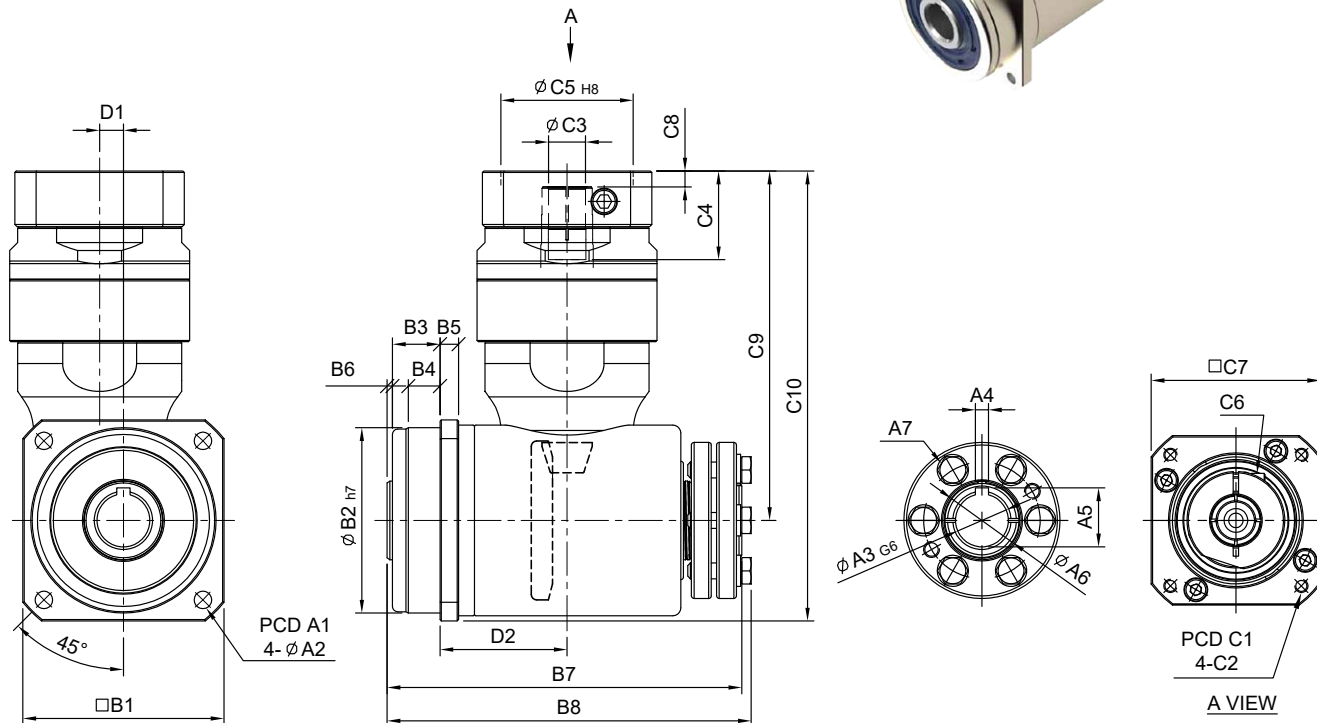


# HF-RN series

RATIO : 25.50.75.100.150 (2-Stage)



Fitted with Planetary Reducer - Single Clamping



unit: mm

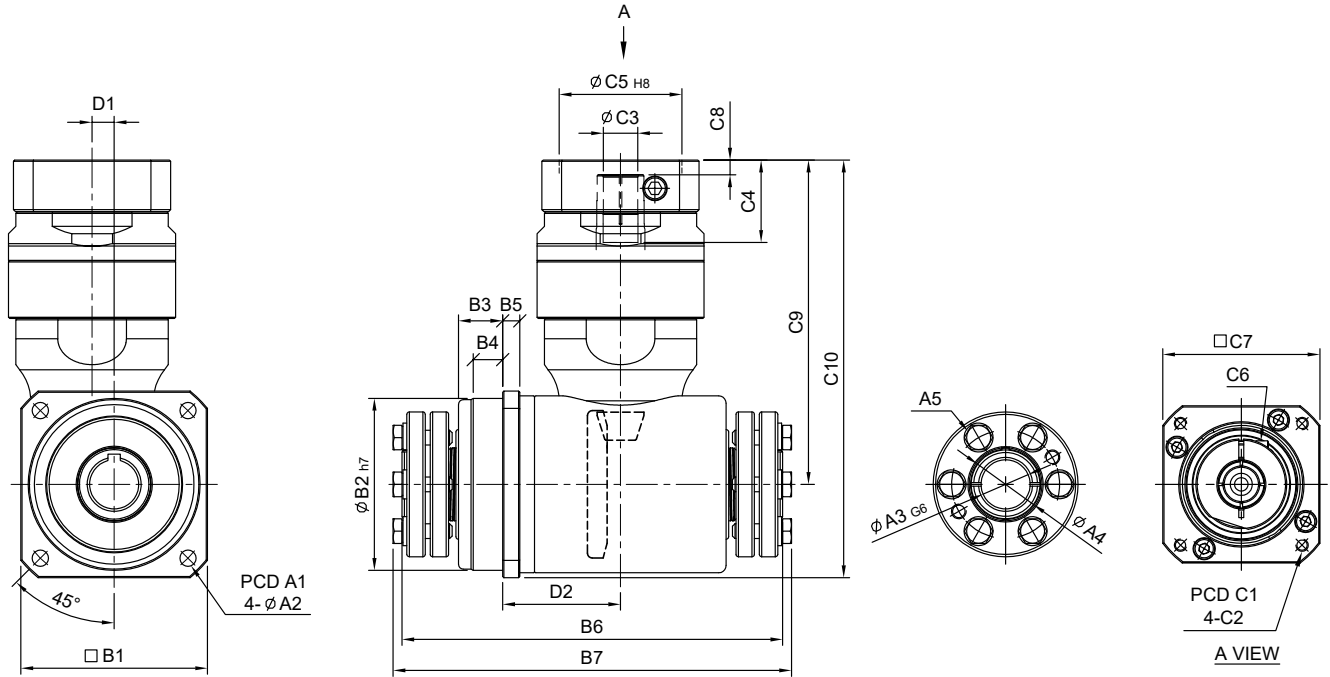
|          | Model Code | 60           | 75           | 100          | 140                  | 180               |
|----------|------------|--------------|--------------|--------------|----------------------|-------------------|
| <b>A</b> | A1         | 68           | 85           | 120          | 165                  | 215               |
|          | A2         | 5.5          | 6.5          | 9            | 11                   | 13                |
|          | A3         | 15           | 20           | 28           | 40                   | 55                |
|          | A4         | 4            | 5            | 8            | 12                   | 14                |
|          | A5         | 16.7         | 22.3         | 31.3         | 43.3                 | 58.8              |
|          | A6         | 22           | 28           | 38           | 52                   | 73                |
|          | A7         | 6-M6         | 6-M6         | 8-M6         | 8-M6                 | 8-M6              |
| <b>B</b> | B1         | 62           | 76           | 106          | 142                  | 190               |
|          | B2         | 60           | 70           | 90           | 130                  | 160               |
|          | B3         | 18           | 18           | 27           | 27                   | 26                |
|          | B4         | 11           | 12           | 16           | 15.5                 | 15.5              |
|          | B5         | 6            | 7            | 10           | 12                   | 15                |
|          | B6         | 2            | 2            | 2            | 3                    | 3                 |
|          | B7         | 123.5        | 134          | 173          | 223                  | 279               |
|          | B8         | 127          | 138          | 177          | 229                  | 284               |
| <b>C</b> | C1         | 46 · 60 · 63 | 70 · 75 · 90 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165   |
|          | C2         | M3 · M4 · M5 | M4 · M5 · M6 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10     |
|          | C3         | 8 · 9 · 11   | 11 · 14      | 11 · 14      | 16 · 19 · 22 · 24    | 22 · 24 · 28 · 32 |
|          | C4         | 26           | 33.5         | 33.5         | 59.2                 | 67.5              |
|          | C5         | 30 · 40 · 50 | 50 · 60 · 70 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130    |
|          | C6         | M4 x P0.7    | M5 x P0.8    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25        |
|          | C7         | 46 · 55      | 64 · 70 · 80 | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150   |
|          | C8         | 5            | 6            | 6            | 9.2                  | 10.5              |
|          | C9         | 98           | 132          | 155          | 220                  | 278.5             |
|          | C10        | 129          | 170          | 208          | 294.5                | 382.5             |
| <b>D</b> | D1         | 9            | 9            | 14           | 23                   | 32                |
|          | D2         | 41.5         | 48           | 65           | 90                   | 125               |

Weight ±3% (kg)

# HF-RM series

RATIO : 25.50.75.100.150 (2-Stage)

Fitted with Planetary Reducer - Double Clamping



unit: mm

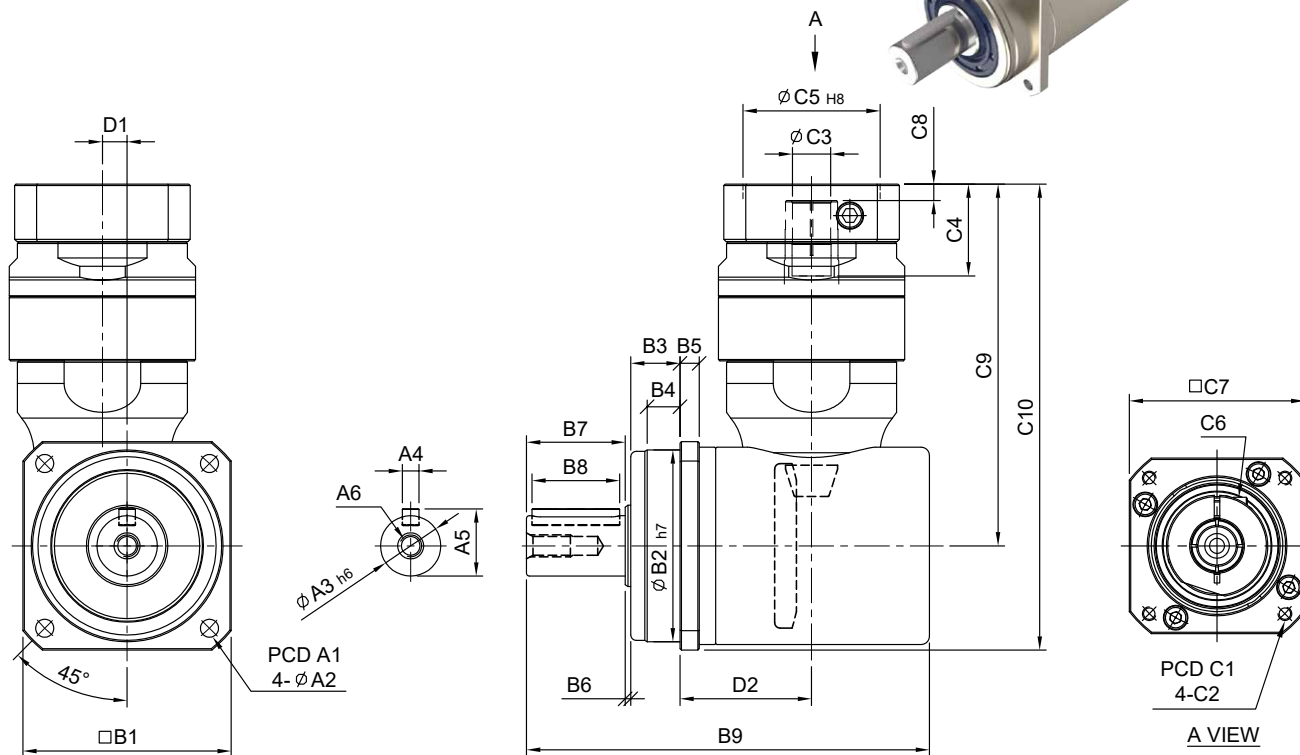
|          | Model Code | 60           | 75           | 100          | 140                  | 180               |
|----------|------------|--------------|--------------|--------------|----------------------|-------------------|
|          |            | <b>A</b>     | A1           | 68           | 85                   | 120               |
|          | A2         | 5.5          | 6.5          | 9            | 11                   | 13                |
|          | A3         | 15           | 20           | 28           | 40                   | 55                |
|          | A4         | 22           | 28           | 38           | 52                   | 73                |
|          | A5         | 6-M6         | 6-M6         | 8-M6         | 8-M6                 | 8-M6              |
| <b>B</b> | B1         | 62           | 76           | 106          | 142                  | 190               |
|          | B2         | 60           | 70           | 90           | 130                  | 160               |
|          | B3         | 18           | 18           | 27           | 27                   | 26                |
|          | B4         | 11           | 12           | 16           | 15.5                 | 15.5              |
|          | B5         | 6            | 7            | 10           | 12                   | 15                |
|          | B6         | 144          | 155          | 195          | 253                  | 311               |
|          | B7         | 153          | 162          | 202          | 264                  | 320               |
| <b>C</b> | C1         | 46 · 60 · 63 | 70 · 75 · 90 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165   |
|          | C2         | M3 · M4 · M5 | M4 · M5 · M6 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10     |
|          | C3         | 8 · 9 · 11   | 11 · 14      | 11 · 14      | 16 · 19 · 22 · 24    | 22 · 24 · 28 · 32 |
|          | C4         | 26           | 33.5         | 33.5         | 59.2                 | 67.5              |
|          | C5         | 30 · 40 · 50 | 50 · 60 · 70 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130    |
|          | C6         | M4 x P0.7    | M5 x P0.8    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25        |
|          | C7         | 46 · 55      | 64 · 70 · 80 | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150   |
|          | C8         | 5            | 6            | 6            | 9.2                  | 10.5              |
|          | C9         | 98           | 132          | 155          | 220                  | 278.5             |
|          | C10        | 129          | 170          | 208          | 294.5                | 382.5             |
| <b>D</b> | D1         | 9            | 9            | 14           | 23                   | 32                |
|          | D2         | 41.5         | 48           | 65           | 90                   | 125               |

Weight ±3% (kg)

# HF-RS series

RATIO : 25.50.75.100.150 (2-Stage)

Fitted with Planetary Reducer - Single Output Shaft



unit: mm

|          | Model Code | 60           | 75           | 100          | 140                  | 180               |
|----------|------------|--------------|--------------|--------------|----------------------|-------------------|
| <b>A</b> | A1         | 68           | 85           | 120          | 165                  | 215               |
|          | A2         | 5.5          | 6.5          | 9            | 11                   | 13                |
|          | A3         | 16           | 22           | 28           | 40                   | 55                |
|          | A4         | 5            | 6            | 8            | 12                   | 16                |
|          | A5         | 18           | 24.5         | 31           | 43                   | 59                |
|          | A6         | M5 x P0.8    | M8 x P.125   | M10 x 1.5    | M12 x P1.75          | M16 x P20         |
| <b>B</b> | B1         | 62           | 76           | 106          | 142                  | 190               |
|          | B2         | 60           | 70           | 90           | 130                  | 160               |
|          | B3         | 18           | 18           | 27           | 27                   | 26                |
|          | B4         | 11           | 12           | 16           | 15.5                 | 15.5              |
|          | B5         | 6            | 7            | 10           | 12                   | 15                |
|          | B6         | 2            | 2            | 2            | 3                    | 3                 |
|          | B7         | 28           | 36           | 50           | 70                   | 82                |
|          | B8         | 25           | 32           | 45           | 60                   | 70                |
|          | B9         | 129          | 147          | 199          | 260                  | 326               |
| <b>C</b> | C1         | 46 · 60 · 63 | 70 · 75 · 90 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165   |
|          | C2         | M3 · M4 · M5 | M4 · M5 · M6 | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10     |
|          | C3         | 8 · 9 · 11   | 11 · 14      | 11 · 14      | 16 · 19 · 22 · 24    | 22 · 24 · 28 · 32 |
|          | C4         | 26           | 33.5         | 33.5         | 59.2                 | 67.5              |
|          | C5         | 30 · 40 · 50 | 50 · 60 · 70 | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130    |
|          | C6         | M4 x P0.7    | M5 x P0.8    | M5 x P0.8    | M6 x P1.0            | M8 x P1.25        |
|          | C7         | 46 · 55      | 64 · 70 · 80 | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150   |
|          | C8         | 5            | 6            | 6            | 9.2                  | 10.5              |
|          | C9         | 98           | 132          | 155          | 220                  | 278.5             |
|          | C10        | 129          | 170          | 208          | 294.5                | 382.5             |
| <b>D</b> | D1         | 9            | 9            | 14           | 23                   | 32                |
|          | D2         | 41.5         | 48           | 65           | 90                   | 125               |

Weight ±3% (kg)

HF