

PE series

HIGH PRECISION

PLANETARY REDUCER



Straight Gear

Reducer Performance Information

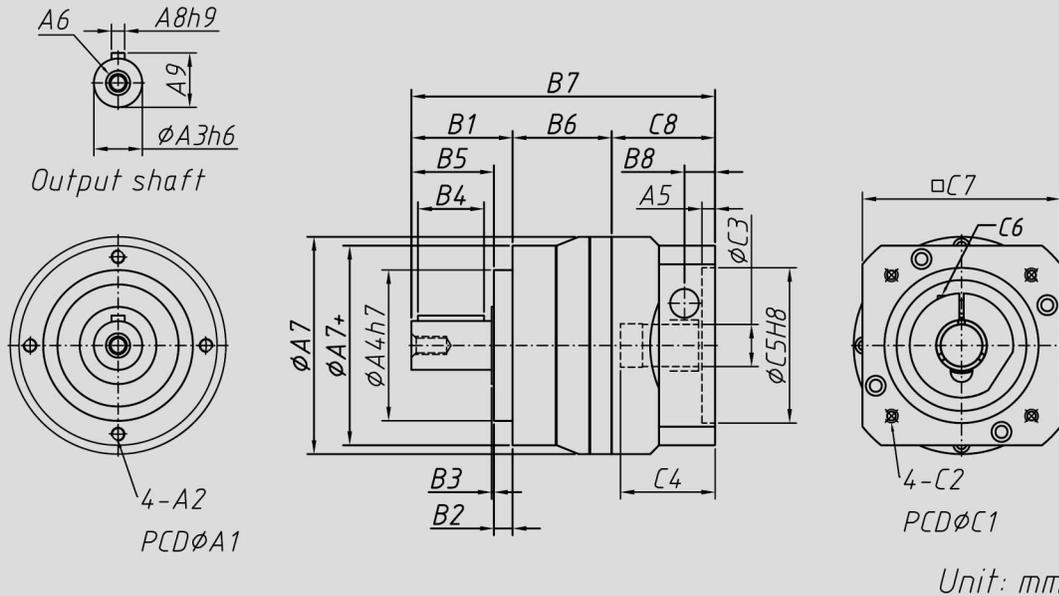
| | Unit | Stage | Ratio | 42 | 60 | 90 | 115 | 142 | 180 |
|--|-----------|-------|--------|--|-----------|-----------|-----------|-----------|-----------|
| Rated Output Torque T_{2N} | Nm | L1 | 3 | 17 | 44 | 115 | 225 | 440 | 955 |
| | | | 4 | 17 | 44 | 118 | 231 | 450 | 875 |
| | | | 5 | 16 | 42 | 123 | 228 | 445 | 850 |
| | | | 7 | 13 | 37 | 101 | 206 | 376 | 805 |
| | | | 10 | 11 | 29 | 73 | 163 | 305 | 775 |
| | | L2 | 15 | 16 | 42 | 114 | 221 | 434 | 955 |
| | | | 20 | 17 | 44 | 121 | 238 | 464 | 875 |
| | | | 25 | 16 | 42 | 128 | 236 | 460 | 850 |
| | | | 30 | 16 | 42 | 113 | 220 | 432 | 955 |
| | | | 35 | 13 | 37 | 105 | 214 | 392 | 805 |
| | | | 40 | 17 | 45 | 122 | 240 | 469 | 875 |
| | | | 50 | 16 | 42 | 128 | 236 | 460 | 850 |
| | | | 70 | 13 | 37 | 105 | 214 | 392 | 805 |
| | | | 100 | 11 | 29 | 75 | 170 | 318 | 775 |
| Max. Input Speed n_{1B} | rpm | L1/L2 | 3~100 | 8,000 | 6,000 | 6,000 | 4,800 | 3,600 | 3,000 |
| Rated Input Speed n_{1N} | rpm | L1/L2 | 3~100 | 4,500 | 4,000 | 3,600 | 3,600 | 2,500 | 2,000 |
| Backlash | arcmin | L1 | 3~10 | ≤ 8 | | | | | |
| | | L2 | 15~100 | ≤ 12 | | | | | |
| Max. Acceleration Torque T_{2B} | Nm | L1/L2 | 3~100 | 1.8 Times of nominal output torque | | | | | |
| Max. Output(Emergency Stop) Torque T_{2NOT} | Nm | L1/L2 | 3~100 | 3 Times of nominal output torque | | | | | |
| Torsional Rigidity | Nm/arcmin | L1/L2 | 3~100 | 3 | 7 | 14 | 25 | 50 | 140 |
| Max. Radial Force F_{2rB} | N | L1/L2 | 3~100 | 810 | 1,150 | 1,530 | 3,260 | 4,550 | 11,150 |
| Max. Axial Force F_{2aB} | N | L1/L2 | 3~100 | 405 | 575 | 765 | 1,630 | 2,275 | 5,575 |
| Service Life | hr | L1/L2 | 3~100 | S5 Cycle Operation ; > 20,000 (S1 Continuous Operation ; > 10,000 hrs) | | | | | |
| Operation Temperature | °C | L1/L2 | 3~100 | -25°C ~ 90°C | | | | | |
| Efficiency η | % | L1 | 3~10 | ≤ 97 | | | | | |
| | | L2 | 15~100 | ≤ 94 | | | | | |
| Lubrication | | L1/L2 | 3~100 | Synthetic Lubrication Grease | | | | | |
| Noise Level | dB | L1 | 3~10 | ≤ 60 | ≤ 62 | ≤ 64 | ≤ 66 | ≤ 68 | ≤ 70 |
| | | L2 | 15~100 | ≤ 60 | ≤ 62 | ≤ 64 | ≤ 66 | ≤ 68 | ≤ 72 |
| Protection Class | IP | L1/L2 | 3~100 | IP 65 | | | | | |
| Mounting Position | | L1/L2 | 3~100 | Any direction | | | | | |
| Weight | kg | L1 | 3~10 | 0.6 | 1.4 | 3.3 | 6.9 | 13 | 38 |
| | | L2 | 15~100 | 0.9 | 1.6 | 4.7 | 8.7 | 17 | 48 |

Reducer Moment of inertia

| | Unit | Stage | Ratio | 42 | 60 | 90 | 115 | 142 | 180 |
|----------------------------|--------------------|-------|-------|------|------|------|------|------|-------|
| Moment of inertia J_1 | kg.cm ² | L1 | 3 | 0.04 | 0.14 | 0.61 | 3.25 | 8.75 | 24.63 |
| | | | 4 | 0.04 | 0.13 | 0.48 | 2.74 | 7.16 | 20.12 |
| | | | 5 | 0.04 | 0.11 | 0.47 | 2.74 | 6.84 | 19.80 |
| | | | 7 | 0.04 | 0.11 | 0.44 | 2.58 | 6.78 | 19.21 |
| | | | 10 | 0.04 | 0.11 | 0.44 | 2.57 | 6.68 | 19.13 |
| | | L2 | 15 | 0.04 | 0.14 | 0.61 | 3.25 | 8.75 | 24.63 |
| | | | 20 | 0.04 | 0.13 | 0.48 | 2.74 | 7.16 | 20.12 |
| | | | 25 | 0.04 | 0.11 | 0.47 | 2.74 | 6.84 | 19.80 |
| | | | 30 | 0.04 | 0.14 | 0.61 | 3.25 | 8.75 | 24.63 |
| | | | 35 | 0.04 | 0.11 | 0.44 | 2.58 | 6.78 | 19.21 |
| | | | 40 | 0.04 | 0.11 | 0.48 | 2.74 | 7.16 | 20.12 |
| | | | 50 | 0.04 | 0.11 | 0.47 | 2.74 | 6.84 | 19.80 |
| | | | 70 | 0.04 | 0.11 | 0.44 | 2.58 | 6.78 | 19.21 |
| | | | 100 | 0.04 | 0.11 | 0.44 | 2.57 | 6.68 | 19.13 |

MODEL : PE SERIES

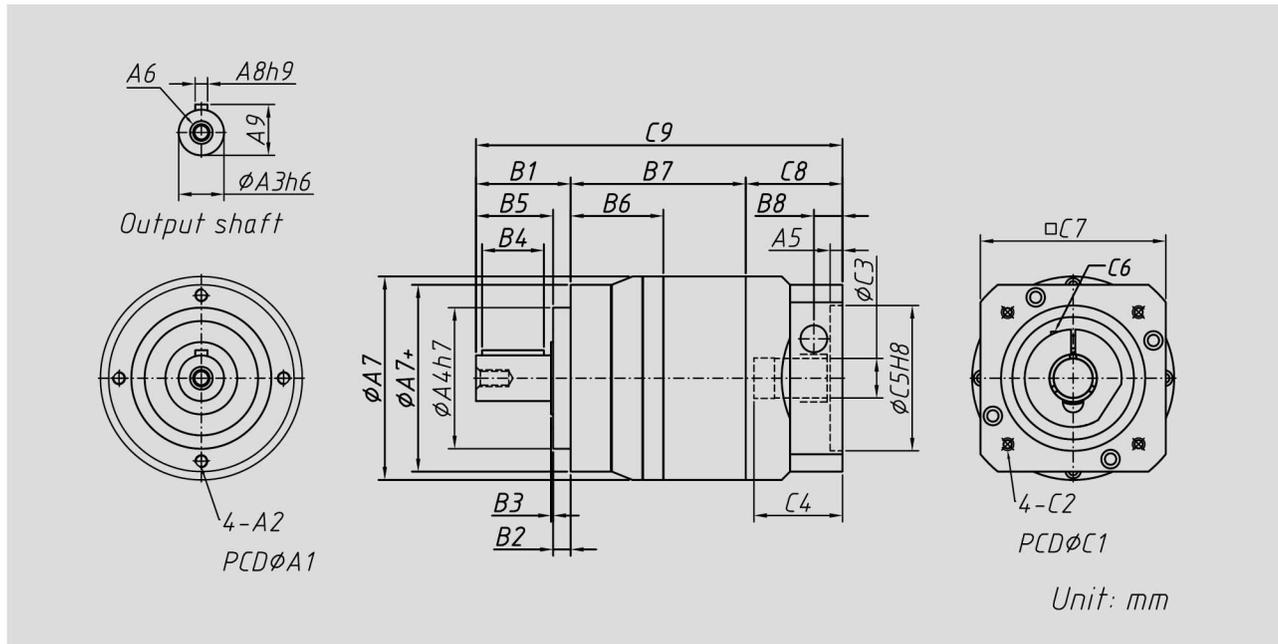
1-Stage (Ratio:3~10)



| Model Code | 42 | 60 | 90 | 115 | 142 | 180 |
|------------|-----------|-----------|------------|-------------|-------------|-------------|
| A1 | 44 | 62 | 80 | 108 | 140 | 184 |
| A2 | M4 x P0.7 | M5 x P0.8 | M6 x P1.0 | M6 x P1.0 | M10 x P1.25 | M12 x P1.75 |
| A3 | 13 | 16 | 22 | 32 | 40 | 55 |
| A4 | 35 | 52 | 68 | 90 | 120 | 160 |
| A5 | 6 | 6 | 7.5 | 22.5 | 11 | 12 |
| A6 | M4 x P0.7 | M5 x P0.8 | M8 x P1.25 | M12 x P1.75 | M16 x P2.0 | M20 x P2.5 |
| A7 | 59 | 70 | 98 | 125 | 156 | 212 |
| A7+ | 50 | 70 | 90 | 120 | 156 | 205 |
| A8 | 5 | 5 | 6 | 10 | 12 | 16 |
| A9 | 15 | 18 | 24.5 | 35 | 43 | 59 |
| B1 | 24.5 | 36.5 | 46 | 70 | 97 | 99.5 |
| B2 | 4 | 6.5 | 8.5 | 17 | 15 | 15 |
| B3 | 1.6 | 1.5 | 1 | 2 | 3 | 2.5 |
| B4 | 15 | 25 | 30 | 40 | 63 | 70 |
| B5 | 20.5 | 30 | 37.5 | 53 | 82 | 84.5 |
| B6 | 28.3 | 33.5 | 45 | 49 | 72 | 87.5 |
| B7 | 114.8 | 114 | 138 | 190 | 251 | 283 |
| B8 | 11 | 10.5 | 14 | 30 | 23 | 27.5 |
| C1 | 46 | 70 | 90 | 145 | 165 | 200 |
| C2 | M4 x P0.7 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M12 x P1.75 |
| C3 | 8 | 14, 19 | 19, 24 | 24, 28 | 35, 42 | 42 |
| C4 | 26 | 34.1 | 43 | 67.5 | 68.1 | 72.5 |
| C5 | 30 | 50 | 70 | 110 | 130 | 114.3 |
| C6 | M3 x P0.5 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M12 x P1.75 |
| C7 | 42.6 | 60 | 90 | 130 | 142 | 180 |
| C8 | 34.5 | 44 | 47 | 71 | 82 | 91 |

MODEL : PE SERIES

2-Stage (Ratio:15~100)



| Model Code | 42 | 60 | 90 | 115 | 142 | 180 |
|------------|-----------|-----------|------------|-------------|-------------|-------------|
| A1 | 44 | 62 | 80 | 108 | 140 | 184 |
| A2 | M4 X P0.7 | M5 x P0.8 | M6 x P1.0 | M6 x P1.0 | M10 x P1.25 | M12 x P1.75 |
| A3 | 13 | 16 | 22 | 32 | 40 | 55 |
| A4 | 35 | 52 | 68 | 90 | 120 | 160 |
| A5 | 6 | 6 | 7.5 | 22.5 | 11 | 12 |
| A6 | M4 x P0.7 | M5 x P0.8 | M8 x P1.25 | M12 x P1.75 | M16 x P2.0 | M20 x P2.5 |
| A7 | 59 | 70 | 98 | 125 | 156 | 212 |
| A7+ | 50 | 70 | 90 | 120 | 156 | 205 |
| A8 | 5 | 5 | 6 | 10 | 12 | 16 |
| A9 | 15 | 18 | 24.5 | 35 | 43 | 59 |
| B1 | 24.5 | 36.5 | 46 | 70 | 97 | 99.5 |
| B2 | 4 | 6.5 | 8.5 | 17 | 15 | 15 |
| B3 | 1.6 | 1.5 | 1 | 2 | 3 | 2.5 |
| B4 | 15 | 25 | 30 | 40 | 63 | 70 |
| B5 | 20.5 | 30 | 37.5 | 53 | 82 | 84.5 |
| B6 | 28.3 | 33.5 | 45 | 49 | 72 | 87.5 |
| B7 | 54.3 | 61.5 | 85 | 97 | 133 | 177.5 |
| B8 | 11 | 10.5 | 14 | 30 | 23 | 27.5 |
| C1 | 46 | 70 | 90 | 145 | 165 | 200 |
| C2 | M4 x P0.7 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M12 x P1.75 |
| C3 | 8 | 14, 19 | 19, 24 | 24, 28 | 35, 42 | 42 |
| C4 | 26 | 34.1 | 43 | 67.5 | 68.1 | 72.5 |
| C5 | 30 | 50 | 70 | 110 | 130 | 114.3 |
| C6 | M3 x P0.5 | M5 x P0.8 | M6 x P1.0 | M8 x P1.25 | M10 x P1.5 | M12 x P1.75 |
| C7 | 42.6 | 60 | 90 | 130 | 142 | 180 |
| C8 | 34.5 | 44 | 47 | 71 | 82 | 91 |
| C9 | 114.8 | 142 | 178 | 238 | 312 | 373 |