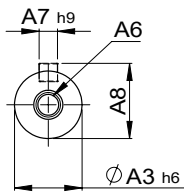


SERVOBOX Planetary Reducers

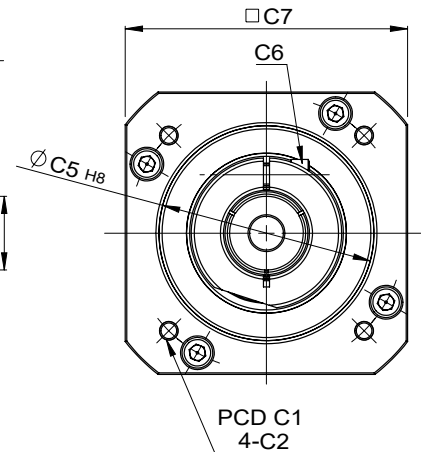
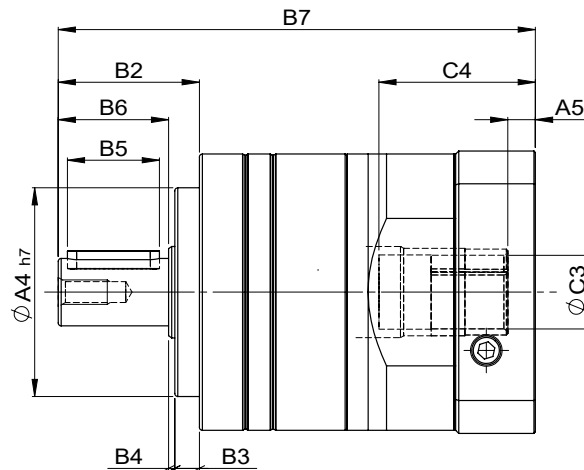
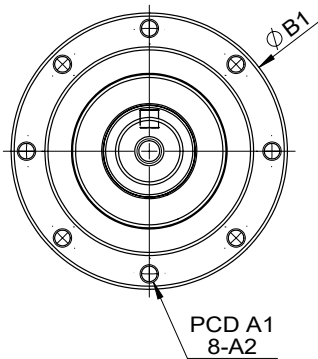
MODEL : SA

單段 1-Stage

RATIO : 3, 4, 5, 7, 10

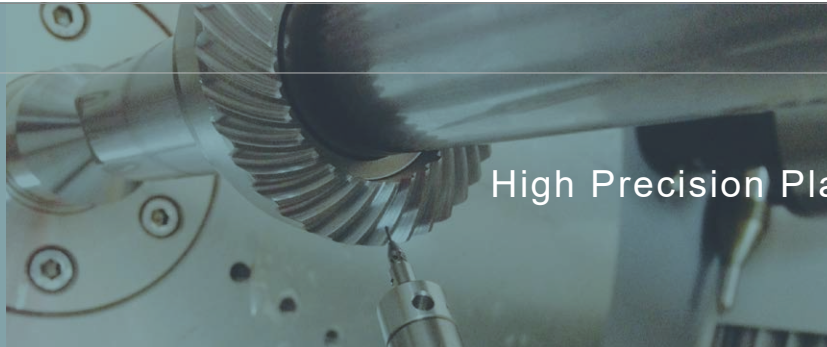


A VIEW



unit: mm

| Model | 50 | 70 | 90 | 120 | 160 |
|----------|-------------------|--------------|----------------------|-----------------|--------------|
| A | | | | | |
| Code | | | | | |
| A1 | 44 | 62 | 80 | 108 | 140 |
| A2 | M4 x 0.7 | M5 x 0.8 | M6 x 1.0 | M8 x 1.25 | M10 x 1.5 |
| A3 | 12 | 16 | 22 | 32 | 40 |
| A4 | 35 | 52 | 68 | 90 | 120 |
| A5 | 4.5 | 6 | 9 · 23.5 | 10 · 20 | 10 |
| A6 | M4 x 0.7 | M5 x 0.8 | M8 x 1.25 | M12 x 1.75 | M12 x 1.75 |
| A7 | 4 | 5 | 6 | 10 | 12 |
| A8 | 13.5 | 18 | 24.5 | 35 | 43 |
| B | | | | | |
| B1 | 51 | 70 | 90 | 122 | 160 |
| B2 | 25.5 | 36 | 46 | 70 | 88 |
| B3 | 4 | 6.5 | 8 | 9 | 8 |
| B4 | 1.5 | 1.5 | 2 | 3 | 2 |
| B5 | 15 | 20 | 30 | 50 | 65 |
| B6 | 20 | 28 | 36 | 58 | 78 |
| B7 | 96.5 | 115 | 155.5 · 170 | 211 · 221 | 238.5 |
| C | | | | | |
| C1 | 45 · 46 · 63 · 70 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 165 |
| C2 | M3 · M4 · M5 | M5 · M6 | M6 · M8 | M6 · M8 · M10 | M10 |
| C3 | 11 · 14 | 14 · 19 | 19 · 24 | 24 · 28 · 32 | 24 · 28 · 32 |
| C4 | 32 | 33.5 · 41 | 51 · 65.5 | 67 · 77 | 63 |
| C5 | 30 · 40 · 50 | 50 · 60 · 70 | 70 · 80 · 95 · 110 | 95 · 110 · 130 | 130 |
| C6 | M4 x 0.7 | M5 x 0.8 | M6 x 1.0 | M8 x 1.25 | M8 x 1.25 |
| C7 | 46 · 55 · 60 | 70 · 75 · 80 | 92 · 110 · 130 | 122 · 130 · 150 | 150 |



High Precision Planetary Reducer

| 規格 Parameter | 代號 | 單位 Unit | 速比 Ratio | 50 | 70 | 90 | 120 | 160 |
|---|------------|------------|-------------|---|-------|-------|-------|-------|
| 額定輸出扭矩 Rated Output Torque (Nominal output torque) | T_{2N} | Nm | 3 | 17 | 54 | 165 | 216 | 625 |
| | | | 4 | 15 | 48 | 146 | 208 | 555 |
| | | | 5 | 14 | 45 | 155 | 333 | 618 |
| | | | 7 | 13 | 41 | 142 | 309 | 573 |
| | | | 10 | 12 | 40 | 136 | 294 | 549 |
| 最大加速扭矩 Max. Acceleration Torque | T_{2B} | Nm | 3 ~ 10 | 1.8 倍額定輸出扭矩 1.8 Times of Rated Output Torque | | | | |
| 最大輸出扭矩 Max. Output Torque 急停扭矩 Emergency Stop Torque | T_{2NOT} | Nm | 3 ~ 10 | 3 倍額定輸出扭矩 3 Times of Rated Output Torque | | | | |
| 額定輸入轉速 Rated Input Speed | n_{1N} | rpm | 3 ~ 10 | 3,000 | | | | |
| 最大輸入轉速 Max. Input Speed | n_{1B} | rpm | 3 ~ 10 | 6,000 | 6,000 | 6,000 | 5,000 | 5,000 |
| 扭轉剛性 Torsional Rigidity | | Nm/arcmin | 3 ~ 10 | 3 | 3 | 15 | 27 | 60 |
| 背隙 Backlash Ps | | arcmin | 3 ~ 10 | - | - | ≤ 1 | ≤ 1 | ≤ 1 |
| 背隙 Backlash P0 | | arcmin | 3 ~ 10 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 3 |
| 背隙 Backlash P1 | | arcmin | 3 ~ 10 | ≤ 5 | ≤ 5 | ≤ 5 | ≤ 5 | ≤ 5 |
| 背隙 Backlash P2 | | arcmin | 3 ~ 10 | ≤ 7 | ≤ 7 | ≤ 7 | ≤ 7 | ≤ 7 |
| 容許徑向力 Max. Radial Force | F_{2rB} | N | 3 ~ 10 | 320 | 800 | 4,150 | 8,760 | 9,300 |
| 容許軸向力 Max. Axial Force | F_{2aB} | N | 3 ~ 10 | 160 | 400 | 3,780 | 7,500 | 4,650 |
| 使用壽命 Service Life | L_H | hr | 3 ~ 10 | S5 周期運轉 : >30,000 (S1 連續運轉 : >15,000 hrs) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs) | | | | |
| 效率 Efficiency | η | % | 3 ~ 10 | ≥ 97% | | | | |
| 使用溫度 Operating Temperature | | °C | 3 ~ 10 | -25°C ~ +90°C | | | | |
| 潤滑 Lubrication | | | 3 ~ 10 | 全合成潤滑油脂 Synthetic Grease | | | | |
| 防護等級 Protection Class | | | 3 ~ 10 | IP 65 | | | | |
| 安裝方向 Mounting Position | | | 3 ~ 10 | 任意方向 Any | | | | |
| 噪音值 Noise Level | | dB | 3 ~ 10 | ≤ 58 | ≤ 58 | ≤ 60 | ≤ 63 | ≤ 65 |
| 重量 Weight ±2% | | Kg | 3 ~ 10 | 0.6 | 1.4 | 2.8 | 6.7 | 13.25 |

■ 轉動慣量 Mass Moments of Inertia (kg.cm²)

| 速比 Ratio | 50 | 70 | 90 | 120 | 160 |
|----------|------|------|------|------|------|
| 3 | 0.03 | 0.15 | 0.60 | 3.21 | 9.21 |
| 4 | 0.03 | 0.15 | 0.51 | 2.80 | 7.54 |
| 5 | 0.03 | 0.13 | 0.45 | 2.71 | 7.42 |
| 7 | 0.03 | 0.13 | 0.42 | 2.54 | 7.14 |
| 10 | 0.03 | 0.13 | 0.42 | 2.51 | 7.03 |