

PSII / PSIIR Gearbox Performance

| Model No. | Stages | Ratio ⁽¹⁾ | Type | PSII A | PSII B | PSII C | PSII D | PSII E | |
|---|-----------|----------------------|--------|---------|--|---------|---------|---------|-------|
| | | | | PSIIR A | PSIIR B | PSIIR C | PSIIR D | PSIIR E | |
| Nominal Output Torque T _{2N} | 1 | 3 | All | 16 | 42 | 110 | 217 | 430 | |
| | | 4 | | 16 | 42 | 113 | 223 | 440 | |
| | | 5 | | 15 | 40 | 118 | 220 | 435 | |
| | | 7 | | 12 | 35 | 96 | 198 | 366 | |
| | | 9 | | 8 | 24 | 60 | 125 | 273 | |
| | | 10 | | 10 | 27 | 68 | 155 | 295 | |
| | 2 | 12 | | 16 | 42 | 110 | 217 | 430 | |
| | | 15 | | 15 | 40 | 109 | 213 | 424 | |
| | | 16 | | 16 | 42 | 116 | 228 | 452 | |
| | | 20 | | 16 | 42 | 116 | 230 | 454 | |
| | | 25 | | 15 | 40 | 123 | 228 | 450 | |
| | | 30 | | 15 | 40 | 108 | 212 | 422 | |
| | | 35 | | 12 | 35 | 100 | 206 | 382 | |
| | | 40 | | 16 | 43 | 117 | 232 | 459 | |
| | | 50 | | 15 | 40 | 123 | 228 | 450 | |
| | | 70 | | 12 | 35 | 100 | 206 | 382 | |
| | | 81 | | 8 | 24 | 59 | 131 | 285 | |
| | | 100 | | 10 | 27 | 70 | 162 | 308 | |
| Emergency Stop Torque T _{2NOT} | Nm | 1,2 | 3~100 | All | 3 times T _{2N} | | | | |
| Max. Acceleration Torque T _{2B} | Nm | 1,2 | 3~100 | All | T _{2B} = 60% of T _{2NOT} | | | | |
| No Load Running Torque ⁽⁴⁾ | 1 | 3~10 | PSII | 0.05 | 0.10 | 0.40 | 0.80 | 2.50 | |
| | | | PSIIR | 0.15 | 0.6 | 1.6 | 3 | 6.8 | |
| | 2 | 12~100 | PSII | 0.05 | 0.10 | 0.30 | 0.40 | 0.80 | |
| | | | PSIIR | 0.15 | 0.58 | 1.58 | 2.5 | 3 | |
| Backlash ⁽²⁾ | 1 | 3~10 | PSII | ≤ 8 | ≤ 7 | ≤ 6 | ≤ 6 | ≤ 6 | |
| | | | PSIIR | ≤ 12 | ≤ 11 | ≤ 10 | ≤ 10 | ≤ 10 | |
| | 2 | 12~100 | PSII | ≤ 10 | ≤ 9 | ≤ 8 | ≤ 8 | ≤ 8 | |
| | | | PSIIR | ≤ 14 | ≤ 13 | ≤ 12 | ≤ 12 | ≤ 12 | |
| Torsional Rigidity | Nm/arcmin | 1,2 | 3~100 | All | 0.6 | 1.5 | 6 | 10.5 | 18 |
| Nominal Input Speed n _{1N} | rpm | 1,2 | 3~100 | All | 4,500 | 4,000 | 3,600 | 3,600 | 2,500 |
| Max. Input Speed n _{1B} | rpm | 1,2 | 3~100 | All | 8,000 | 6,000 | 6,000 | 4,800 | 3,600 |
| Max. Radial Load F _{2rB} ⁽³⁾ | N | 1,2 | 3~100 | All | 840 | 1,290 | 1,510 | 3,780 | 5,420 |
| Max. Axial Load F _{2aB} ⁽³⁾ | N | 1,2 | 3~100 | All | 420 | 645 | 755 | 1,890 | 2,710 |
| Max. Tilting Moment M _{2K} | Nm | 1,2 | 3~100 | All | 15 | 35 | 55 | 170 | 300 |
| Operating Temp | °C | 1,2 | 3~100 | All | 0° C~ +90° C | | | | |
| Degree of Gearbox Protection | | 1,2 | 3~100 | All | IP65 | | | | |
| Lubrication | | 1,2 | 3~100 | All | Synthetic lubrication grease | | | | |
| Mounting Position | | 1,2 | 3~100 | All | All directions | | | | |
| Running Noise ⁽⁴⁾ | dB(A) | 1,2 | 3~100 | PSII | ≤ 60 | ≤ 62 | ≤ 64 | ≤ 66 | ≤ 68 |
| | | | | PSIIR | ≤ 70 | ≤ 72 | ≤ 74 | ≤ 75 | ≤ 77 |
| Max. bending moment based on the gearbox input flange Mb ⁽⁵⁾ | Nm | 1,2 | 3~100 | PSII | 5 | 12 | 22 | 45 | 54 |
| | | | | PSIIR | 3 | 6 | 10 | 17 | 19 |
| Efficiency η | % | 1 | 3~10 | PSII | ≥ 97% | | | | |
| | | | | PSIIR | ≥ 93% | | | | |
| | | 2 | 12~100 | PSII | ≥ 94% | | | | |
| | | | | PSIIR | ≥ 90% | | | | |

(1) Ratio (i= N_{in} / N_{out}).

(2) Backlash is measured at 2% of Nominal Output Torque T_{2N}.

(3) Applied to the output shaft center at 100 rpm.

(4) The dB values are measured by gearbox with ratio 10 (1-stage) or ratio 100 (2-stage), no loading at 3,000 RPM or at the respective Nominal Input Speed by bigger model size.

By lower ratio and/or higher RPM, the noise level could be 3 to 5 dB higher.

(5) Max. motor weight* (kg) = $\frac{0.1 \times Mb}{\text{motor length (m)}}$

*with symmetrically distributed motor weight

*with horizontal and stationary mounting