

AER Series

Specifications

Gearbox Performance

| Model No. | Stage | Ratio | AER050 | AER070 | AER090 | AER120 | AER155 | AER205 | AER235 | |
|---|-----------|-------|--------|----------------------------------|--------|--------|--------|--------|--------|--------|
| Nominal output torque T_{2N} | 1 | 3 | 9 | 36 | 90 | 195 | 342 | 588 | 1,140 | |
| | | 4 | 12 | 48 | 120 | 260 | 520 | 1,040 | 1,680 | |
| | | 5 | 15 | 60 | 150 | 325 | 650 | 1,200 | 2,000 | |
| | | 6 | 18 | 55 | 150 | 310 | 600 | 1,100 | 1,900 | |
| | | 7 | 19 | 50 | 140 | 300 | 550 | 1,100 | 1,800 | |
| | | 8 | 17 | 45 | 120 | 260 | 500 | 1,000 | 1,600 | |
| | | 9 | 14 | 40 | 100 | 230 | 450 | 900 | 1,500 | |
| | | 10 | 14 | 40 | 100 | 230 | 450 | 900 | 1,500 | |
| | | 14 | - | 42 | 140 | 300 | 550 | 1,100 | 1,800 | |
| | | 20 | - | 40 | 100 | 230 | 450 | 900 | 1,500 | |
| | 2 | 15 | 14 | - | - | - | - | - | - | - |
| | | 20 | 14 | - | - | - | - | - | - | - |
| | | 25 | 15 | 60 | 150 | 325 | 650 | 1,200 | 2,000 | |
| | | 30 | 20 | 55 | 150 | 310 | 600 | 1,100 | 1,900 | |
| | | 35 | 19 | 50 | 140 | 300 | 550 | 1,100 | 1,800 | |
| | | 40 | 17 | 45 | 120 | 260 | 500 | 1,000 | 1,600 | |
| | | 45 | 14 | 40 | 100 | 230 | 450 | 900 | 1,500 | |
| | | 50 | 14 | 60 | 100 | 230 | 650 | 1,200 | 2,000 | |
| | | 60 | 20 | 55 | 150 | 310 | 600 | 1,100 | 1,900 | |
| | | 70 | 19 | 50 | 140 | 300 | 550 | 1,100 | 1,800 | |
| | | 80 | 17 | 45 | 120 | 260 | 500 | 1,000 | 1,600 | |
| | | 90 | 14 | 40 | 100 | 230 | 450 | 900 | 1,500 | |
| | | 100 | 14 | 40 | 100 | 230 | 450 | 900 | 1,500 | |
| | | 120 | - | - | 150 | 310 | 600 | 1,100 | 1,900 | |
| | | 140 | - | - | 140 | 300 | 550 | 1,100 | 1,800 | |
| | | 160 | - | - | 120 | 260 | 550 | 1,000 | 1,600 | |
| 180 | - | - | 100 | 230 | 450 | 900 | 1,500 | | | |
| 200 | - | - | 100 | 230 | 450 | 900 | 1,500 | | | |
| Emergency Stop Torque T_{2NOT} ² | Nm | 1,2 | 3~200 | 3 times of nominal output torque | | | | | | |
| Nominal Input Speed n_{1N} | rpm | 1,2 | 3~200 | 5,000 | 5,000 | 4,000 | 4,000 | 3,000 | 3,000 | 2,000 |
| Max. Input Speed n_{1B} | rpm | 1,2 | 3~200 | 10,000 | 10,000 | 8,000 | 8,000 | 6,000 | 6,000 | 4,000 |
| Backlash | arcmin | 1 | 3~20 | ≤10 | ≤10 | ≤10 | ≤10 | ≤10 | ≤10 | ≤10 |
| | | 2 | 25~200 | ≤14 | ≤14 | ≤14 | ≤14 | ≤14 | ≤14 | ≤14 |
| Torsional Rigidity | Nm/arcmin | 1,2 | 3~200 | 3 | 7 | 14 | 25 | 50 | 145 | 225 |
| Max. radial load F_{2rB} ³ | N | 1,2 | 3~200 | 702 | 1,377 | 2,985 | 6,100 | 8,460 | 13,050 | 8,700 |
| Max. axial load F_{2aB} ³ | N | 1,2 | 3~200 | 390 | 765 | 1,625 | 3,350 | 4,700 | 7,250 | 18,000 |
| Service life | hr | 1,2 | 3~200 | 20,000* | | | | | | |
| Efficiency η | % | 1 | 3~20 | ≥95% | | | | | | |
| | | 2 | 25~200 | ≥92% | | | | | | |
| Weight | kg | 1 | 3~20 | 1.0 | 2.1 | 5.8 | 11.2 | 22.4 | 46.8 | 78.0 |
| | | 2 | 25~200 | 1.3 | 2.0 | 4.6 | 11.1 | 21.8 | 43.7 | 81.9 |
| Operating temp | °C | 1,2 | 3~200 | -10°C~90°C | | | | | | |
| Lubrication | | | | Synthetic lubrication oils | | | | | | |
| Degree of gearbox protection | | 1,2 | 3~200 | IP65 | | | | | | |
| Mounting position | | 1,2 | 3~200 | all directions | | | | | | |
| Noise Level ($n_1=3000$ rpm, No Load) | dB(A) | 1,2 | 3~200 | ≤61 | ≤63 | ≤65 | ≤68 | ≤70 | ≤72 | ≤74 |

Gearbox Inertia

| Model No. | Stage | Ratio | AER050 | AER070 | AER090 | AER120 | AER155 | AER205 | AER235 |
|-------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mass Moments of Inertia J_1 | 1 | 3~10 | 0.09 | 0.35 | 2.25 | 6.84 | 23.4 | 68.9 | 135.4 |
| | | 14 | - | 0.07 | 1.87 | 6.25 | 21.8 | 65.6 | 119.8 |
| | | 20 | - | 0.07 | 1.87 | 6.25 | 21.8 | 65.6 | 119.8 |
| | 2 | 15 | 0.09 | - | - | - | - | - | - |
| | | 20 | 0.09 | - | - | - | - | - | - |
| | | 25~100 | 0.09 | 0.09 | 0.35 | 2.25 | 6.84 | 23.4 | 68.9 |
| 120~200 | - | - | 0.31 | 1.87 | 6.25 | 21.8 | 65.6 | | |

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

2. $T_{2B} = 60\%$ of T_{2NOT}

3. Applied to the output shaft center @ 100 rpm

★ S1 service life 10,000 hrs (Consult us)