

Gearbox Performance

| Model No. | | Stage | Ratio ^A | AB042 | AB060 | AB060A | AB090 | AB090A | AB115 | AB115A | AB142 | AB142A | AB180 | AB220 |
|---|-----------|-------|--------------------|----------------------------------|--------|--------|-------|--------|-------|--------|-------|--------|--------|--------|
| Nominal Output Torque T_{2N} | Nm | 1 | 3 | 20 | 55 | - | 130 | - | 208 | - | 342 | - | 588 | 1,140 |
| | | | 4 | 19 | 50 | - | 140 | - | 290 | - | 542 | - | 1,050 | 1,700 |
| | | | 5 | 22 | 60 | - | 160 | - | 330 | - | 650 | - | 1,200 | 2,000 |
| | | | 6 | 20 | 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 |
| | | | 12 | 19 | 50 | 50 | 140 | 140 | 290 | 290 | 542 | 542 | 1,050 | 1,700 |
| | | | 15 | 20 | 55 | 55 | 130 | 130 | 208 | 208 | 342 | 342 | 588 | 1,140 |
| | | 16 | 19 | 50 | 50 | 140 | 140 | 290 | 290 | 542 | 542 | 1,050 | 1,700 | |
| | | 20 | 19 | 50 | 50 | 140 | 140 | 290 | 290 | 542 | 542 | 1,050 | 1,700 | |
| | | 25 | 22 | 60 | 60 | 160 | 160 | 330 | 330 | 650 | 650 | 1,200 | 2,000 | |
| | | 28 | 19 | 50 | 50 | 140 | 140 | 300 | 300 | 550 | 550 | 1,100 | 1,800 | |
| | | 30 | 20 | 55 | 55 | 150 | 150 | 310 | 310 | 600 | 600 | 1,100 | 1,900 | |
| | | 32 | 17 | 45 | 45 | 120 | 120 | 260 | 260 | 500 | 500 | 1,000 | 1,600 | |
| | | 35 | 19 | 50 | 50 | 140 | 140 | 300 | 300 | 550 | 550 | 1,100 | 1,800 | |
| | | 40 | 17 | 45 | 45 | 120 | 120 | 260 | 260 | 500 | 500 | 1,000 | 1,600 | |
| | | 45 | 14 | 40 | 40 | 100 | 100 | 230 | 230 | 450 | 450 | 900 | 1,500 | |
| | | 50 | 22 | 60 | 60 | 160 | 160 | 330 | 330 | 650 | 650 | 1,200 | 2,000 | |
| 60 | 20 | 55 | 55 | 150 | 150 | 310 | 310 | 600 | 600 | 1,100 | 1,900 | | | |
| 70 | 19 | 50 | 50 | 140 | 140 | 300 | 300 | 550 | 550 | 1,100 | 1,800 | | | |
| 80 | 17 | 45 | 45 | 120 | 120 | 260 | 260 | 500 | 500 | 1,000 | 1,600 | | | |
| 90 | 14 | 40 | 40 | 100 | 100 | 230 | 230 | 450 | 450 | 900 | 1,500 | | | |
| 100 | 14 | 40 | 40 | 100 | 100 | 230 | 230 | 450 | 450 | 900 | 1,500 | | | |
| Emergency Stop Torque T_{2NOT}^B | Nm | 1,2 | 3~100 | 3 times of Nominal Output Torque | | | | | | | | | | |
| Nominal Input Speed n_{1N} | rpm | 1,2 | 3~100 | 5,000 | 5,000 | 5,000 | 4,000 | 4,000 | 4,000 | 4,000 | 3,000 | 3,000 | 3,000 | 2,000 |
| Max. Input Speed n_{1B} | rpm | 1,2 | 3~100 | 10,000 | 10,000 | 10,000 | 8,000 | 8,000 | 8,000 | 8,000 | 6,000 | 6,000 | 6,000 | 4,000 |
| Micro Backlash P0 | arcmin | 1 | 3~10 | - | - | - | ≤1 | - | ≤1 | - | ≤1 | - | ≤1 | ≤1 |
| | | 2 | 12~100 | - | - | - | - | - | ≤3 | ≤3 | ≤3 | ≤3 | ≤3 | ≤3 |
| Reduced Backlash P1 | arcmin | 1 | 3~10 | ≤3 | ≤3 | - | ≤3 | - | ≤3 | - | ≤3 | - | ≤3 | ≤3 |
| | | 2 | 12~100 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 | ≤5 |
| Standard Backlash P2 | arcmin | 1 | 3~10 | ≤5 | ≤5 | - | ≤5 | - | ≤5 | - | ≤5 | - | ≤5 | ≤5 |
| | | 2 | 12~100 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 | ≤7 |
| Torsional Rigidity | Nm/arcmin | 1,2 | 3~100 | 3 | 7 | 7 | 14 | 14 | 25 | 25 | 50 | 50 | 145 | 225 |
| Max. Radial Load F_{2RB}^C | N | 1,2 | 3~100 | 780 | 1,530 | 1,530 | 3,250 | 3,250 | 6,700 | 6,700 | 9,400 | 9,400 | 14,500 | 50,000 |
| Max. Axial Load F_{2AB}^C | N | 1,2 | 3~100 | 390 | 765 | 765 | 1,625 | 1,625 | 3,350 | 3,350 | 4,700 | 4,700 | 7,250 | 25,000 |
| Service Life ^D | hr | 1,2 | 3~100 | 20,000 | | | | | | | | | | |
| Efficiency η | % | 1 | 3~10 | ≥97% | | | | | | | | | | |
| | | 2 | 12~100 | ≥94% | | | | | | | | | | |
| Weight | kg | 1 | 3~10 | 0.6 | 1.3 | - | 3.7 | - | 7.8 | - | 14.5 | - | 29 | 48 |
| | | 2 | 12~100 | 0.8 | 1.5 | 1.9 | 4.1 | 5.3 | 9 | 11.4 | 17.5 | 20.7 | 33 | 60 |
| Operating Temp | °C | 1,2 | 3~100 | -10°C~90°C | | | | | | | | | | |
| Lubrication | | 1,2 | 3~100 | Synthetic lubrication oils | | | | | | | | | | |
| Degree of Gearbox Protection | | 1,2 | 3~100 | IP65 | | | | | | | | | | |
| Mounting Position | | 1,2 | 3~100 | all directions | | | | | | | | | | |
| Noise ($n_1=3000\text{rpm}$, $i=10$, No load) ^E | dB(A) | 1,2 | 3~100 | ≤56 | ≤58 | ≤60 | ≤60 | ≤63 | ≤63 | ≤65 | ≤65 | ≤67 | ≤67 | ≤70 |