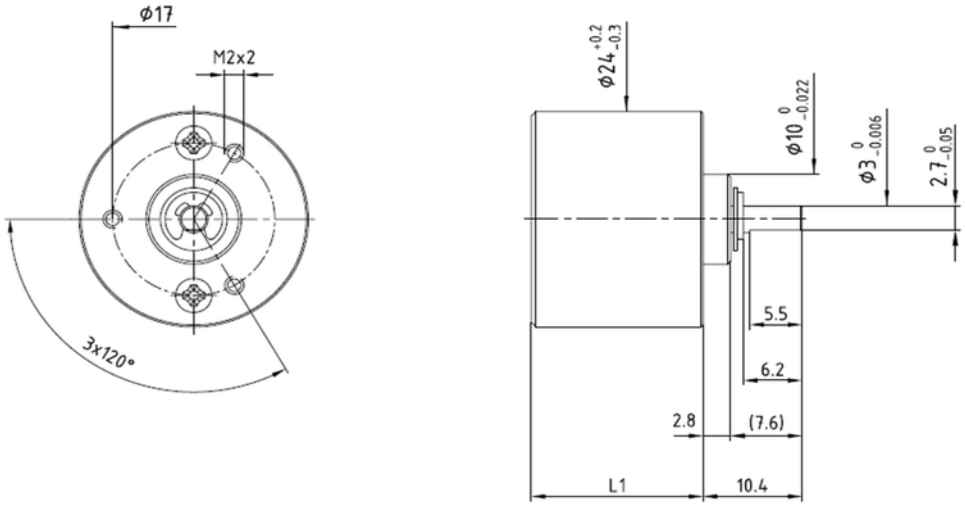
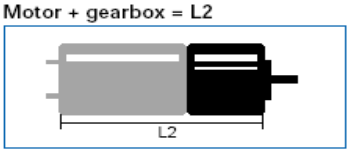
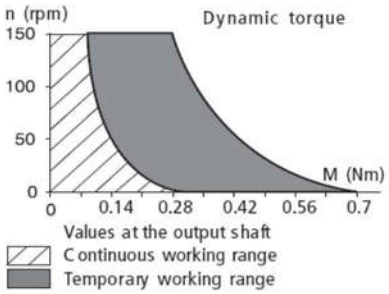



| Ratio **** | 5 | 8 | 20 | 32 | 64 | 128 | 320 | 800 | 2048 |
|---|---|---|---|---|---|---|---|---|---|
| 1 Number of gear stages | 2 | 2 | 4 | 4 | 4 | 4 | 6 | 6 | 6 |
| 2 Direction of rotation | = | = | = | = | = | = | = | = | = |
| 3 Efficiency | 0.85 | 0.85 | 0.75 | 0.75 | 0.75 | 0.75 | 0.65 | 0.65 | 0.65 |
| 4 L1 (mm) | 15 | 15 | 18 | 18 | 18 | 18 | 21 | 21 | 21 |
| 5 Weight g (oz) | 15 (0.529) | 15 (0.529) | 18 (0.634) | 18 (0.634) | 18 (0.634) | 18 (0.634) | 20 (0.705) | 20 (0.705) | 20 (0.705) |
| 6 Available with Motor - L2 = Length with motor (mm) | | | | | | | | | |
| **22N28....286** | 47 | 47 | 50 | 50 | 50 | 50 | 53 | 53 | 53 |
| **22N 48.....308** | 48.9 | 48.9 | 51.9 | 51.9 | 51.9 | 51.9 | 54.9 | 54.9 | 54.9 |
| **22V28....202** | 49.4 | 49.4 | 52.4 | 52.4 | 52.4 | 52.4 | 55.4 | 55.4 | 55.4 |
| **22V 48.....245** | 51.2 | 51.2 | 54.2 | 54.2 | 54.2 | 54.2 | 57.2 | 57.2 | 57.2 |
| **22N78.....1001** | 47 | 47 | 50 | 50 | 50 | 50 | 53 | 53 | 53 |
| **22N98.....1008 / 1005** | 48.9 | 48.9 | 51.9 | 51.9 | 51.9 | 51.9 | 54.9 | 54.9 | 54.9 |
| **23V58....4** | 63.8 | 63.8 | 66.8 | 66.8 | 66.8 | 66.8 | 69.8 | 69.8 | 69.8 |
| **23V48.....11** | 62.6 | 62.6 | 65.6 | 65.6 | 65.6 | 65.6 | 68.6 | 68.6 | 68.6 |
| **26N58.....5** | 58.3 | 58.3 | 61.3 | 61.3 | 61.3 | 61.3 | 64.3 | 64.3 | 64.3 |
| **26N48.....9** | 57.1 | 57.1 | 60.1 | 60.1 | 60.1 | 60.1 | 63.1 | 63.1 | 63.1 |
| **P310.....9.09** | 32.4 | 32.4 | 35.4 | 35.4 | 35.4 | 35.4 | 38.4 | 38.4 | 38.4 |

| Characteristics | | K24 • 0 • ···· | K24 2R • 0 • ···· |
|---|---|---|---|
| 7 Shaft Bearings | | Sleeve | Ball Bearing |
| 8 Maximum Static Torque | Nm (oz-in) | 0.7 (100) | 0.7 (100) |
| 9 Maximum Radial Force | | | |
| @ 8mm from mounting face | N (lb) | 5 (1.1) | 20 (4.5) |
| 10 Maximum Axial force | N (lb) | 8 (1.8) | 10 (2.2) |
| 11 Maximum press fit force | N (lb) | 30 (6.7) | 30 (6.7) |
| 12 Average Backlash @ no-load | | 1.5° | 1.5° |
| 13 Average Backlash @ 3 Nm | | 2.5° | 2.5° |
| Shaft play: | | | |
| 14 -radial | µm | ≤ 40 | ≤ 10 |
| 15 -axial | µm | 50-150 | ≤ 10 |
| 16 Maximum Recommended Input speed | rpm | 5000 | 5,000 |
| 17 Operating Temperature Range: | °C (°F) | -30 to +65 (-22 to +150) | |

Motor + gearbox = L2





(C) 2013. Portescap. Specifications subject to change without notice.