# Drive Requirements

These motors are specifically designed for use in conjunction with AML current-regulated stepper motor drives. If another drive is used it must be a bipolar 2-phase drive and capable of providing a selection of well-regulated currents of less than or equal to 1 Amp per phase. If the drive can provide simultaneous currents to both phases (for step division) then the root of the sum of the squares of the phase currents must never exceed 1 Amp.

The source voltage of alternative drives should be greater than 45 V. Lower voltages will result in loss of torque at higher stepping rates. Voltages over 100 V are not suitable for vacuum use. Switching frequencies should not exceed 22 kHz and peak-to-peak switching ripple on the phase current should not exceed 15%.

The drive current should be reduced or removed when the motor is stopped. For this reason, attempts to improve angular resolution by step division are not recommended.

Refer to the motor datasheet for electrical, mechanical and thermal characteristics.