

AGR Series Worm-Drive Rotary Stages Improve Speed, Load, and Long-Term Positioning Performance

A unique preloading scheme avoids changing wear characteristics, allowing orders of magnitude increase in stage life without any degradation in stage performance, and allows stage operation over a wide temperature range. A larger clear aperture permits applications that require a through-hole to mount an optic, including articulation of beam polarizing lenses. Fabricated from a special aluminum alloy, the AGR stage offers significant weight savings in multi-axis arrangements and other weight critical applications, while providing high structural stiffness and long-term stability. Each stage incorporates dual large-diameter pre-loaded angular contact bearings optimally separated to provide excellent error motion specifications, as well as the best possible load handling capability. All stage tabletops feature aluminum hardcoat plating and stainless steel Heli-Coil inserts to prevent thread wear. Options include flexible motor selections as well as a direct encoder mounted to the axis of rotation for repeatability and to eliminate hysteresis and backlash. Vacuum-compatible (for use in pressures as low as 10⁻⁶ torr).

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