

TECHNICAL PRODUCT SPECIFICATION

Precision Multi-Axis Lead Screw & Linear Drive Shaft

Manufacturer:	ESS KAY ENGINEERS	Report Date:	July 1, 2026
Component:	Precision Ground Helical Lead Screws & Guide Shaft Assembly	Document Ref:	EKE-LS-2026-14J

1. Multi-View Orthographic & Alignment Layout

The technical blueprint documentation below outlines the spatial profiles of the matched linear motion shafts across four quadrant views: Perspective Extension (ISO VIEW), Horizontal Tracking Alignment (TOP VIEW), Linear Profile Geometry (SIDE VIEW), and Detailed Core Exit Faces showing hollow and solid variants (END VIEW).



2. Geometric Specifications & Feature Breakdown

Mechanical Structural Characteristics

- **Continuous Fine-Pitch Helical Threading:** Highly uniform precision-ground thread profiles designed for backlash-free linear translation and high positioning accuracy.
- **Integrated Intermediate Stop Collars:** Raised shoulder sections positioned accurately along the shaft length to limit travel or seat matching thrust bearing assemblies.
- **Differentiated Core Configuration:** As illustrated in the END VIEW cross-section, the pair includes a hollow fluid/cable pass-through core option alongside a standard solid torque shaft.
- **Quality Engineering Audit:** Manufactured and monitored under strict metrology parameters by ESS KAY ENGINEERS to certify linear straightness and minimize axial run-out.