

TECHNICAL PRODUCT SPECIFICATION

Precision Double D Bore Stepping & Cutting Tool Assembly

Manufacturer:	ESS KAY ENGINEERS	Report Date:	July 1, 2026
Component:	Multi-Stage Double D Flat-Sided Broaching Cutters & Collars	Document Ref:	EKE-DD-2026-18N

1. Multi-Axis Orthographic Blueprint Projections

The manufacturing blueprint layout below illustrates the spatial tolerances and alignment profiles of the flat-sided cutting tool elements across four standard quadrants: Front View, Side View (Right), Back View, and a detailed Top-Down Plan View section detailing concentricity.



2. Engineering Parameters & Mechanical Features

Structural Assembly Characteristics

- **Double D Flat-Sided Profile:** Features specialized dual flat edges machined parallel on the drive bore components to prevent rotational slippage under high shearing stresses.
- **Progressive Segmented Cutting Flights:** Intermittent annular cutting bands engineered to distribute chip load evenly during high-precision linear broaching operations.
- **Concentric Alignment Sleeves:** Interchangeable guidance collars (analyzed extensively in the Top-Down Plan View) ensure rigorous coaxial centering within machine spindles.
- **Manufacturing Quality Audit:** Fabricated, heat-treated, and monitored under stringent industrial parameters by ESS KAY ENGINEERS to guarantee superior hardness, edge sharpness, and minimal vibration harmonics.