POLISHING AND ULTRA-PRECISE CORRECTION TECHNOLOGY FOR OPTICAL SURFACES
IRP800G, ZEEKO LTD.

We offer production of ultra-precise surfaces. The instrument IRP 800P from Zeeko Ltd. is a 7 axis CNC optical polishing machine capable of producing ultra-precise surfaces on various optical materials and surface forms. The machine axes can be used for traditional spiral polishing or raster polishing for parts up to 1200 mm in diameter or freeform parts up to 800 mm x 800 mm.

APPLICATION

> Ultra-precise surfaces with geometries: free-form, aspheres, off-axis aspheres, spheres, plano optics, cylinders, prisms and other optical surfaces

MATERIAL/SUBSTRATE TYPES

> Any materials that can be polished by traditional means including glass, ceramics, crystals, suitable metals, semi-conductor materials, composites and others

MODES, CONDITIONS AND PRECISION

> 7-axis CNC control with 3 linear and 4 rotational axes enabling automatic figure control
> Variable tool sizes and materials
> CAD lens design data imports with interfaces for various standard software packages
> Integrated metrology system
> Technology advantages:
  • Minimum corrective polishing times, due to tool control function and high removal rate
  • Reduced correction iterations using an advanced algorithm for corrective polishing
  • High form accuracy ensured by Tool Path Generator
  • Integrated tool alignment and measurement functions
  • Maximum flexibility in substrate geometries and materials

Surface map [μm] of the rotation off-axis hyperboloid manufactured on IRP800P

Detailed information on request