

The FTS 5000 is an oscillating tool attachment designed for Optoform and Nanoform ultra-precision lathes.

It's used for the production of high quality non-rotationally symmetrical (freeform) optical surfaces, such as toric, prism ballasted, slab-offs, wafer-shaped, and numerous others.

Specifications

Type

Non-influencing enhanced Servo-controlled Tool Positioning Device (STPD)

Travel

5.0 mm | 0.2 in.

Typical Operational Sinusoidal Acceleration

2000 μm | 0.078 in. @ 100 Hz
 1000 μm | 0.039 in. @ 140 Hz
 250 μm | 0.010 in. @ 280 Hz
 100 μm | 0.004 in. @ 440 Hz

Tractor Dimensions and Weight¹

(LxWxH)
 244 x 67 x 112 mm
 9.61 x 2.63 x 4.42 in.
 6.45 kg | 14.2 lbs.

Power Distribution Module and Electronics Module Dimensions

(LxWxH)
 432 x 178 x 305 mm
 17 x 7 x 12 in.

Pressurized Air Supply

Air Pressure: 5.4-6.8 bar | 80-100 psi
 Air Consumption: 38 l/min | 1-2 SCFM
 Air Quality: ISO 8573.1 Class 4
 15 μm particle size filtration
 Pressure dew point:
 2.8°C | 37.4°F @ 6.8 bar | 100 psig

Electrical Supply

230 VAC, 47-63 Hz, 390 W
 Power can be drawn from the lathe or directly from the AC outlet²

Stiffness

53 N/ μm @ 6.8 bar
 500,000 lb./in. @ 100 psi

Tool Holder

6.35 mm | 0.25 in. square shank tools

Tool Height Adjustment³

Coarse: ± 2.92 mm | 0.115 in.
 Fine: ± 0.38 mm | 0.015 in.

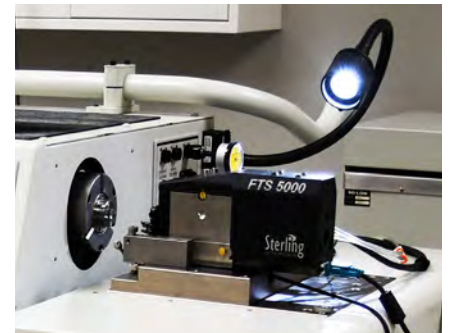
Fault Protection

Current limit fault
 Travel limit fault
 Low air pressure fault

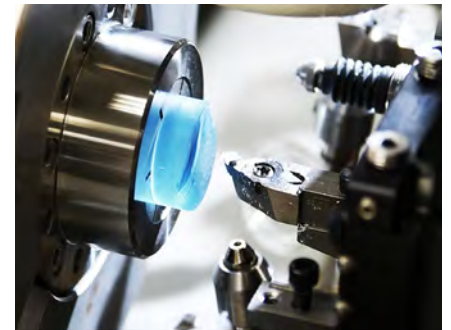
¹ Without tool

² If plugging directly into the AC outlet, use of surge protection is recommended

³ Integral to tool nose



FTS 5000 on an Optoform 80 lathe



Example of a toric lens cut with FTS 5000



FTS 5000 footprint in relation to full toolpost