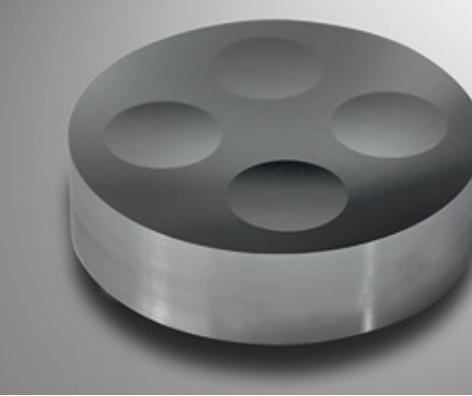
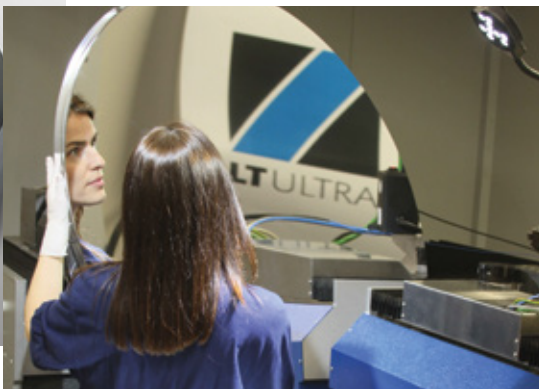


# ULTRA-PRECISION HYDROSTATIC TURNING MACHINES

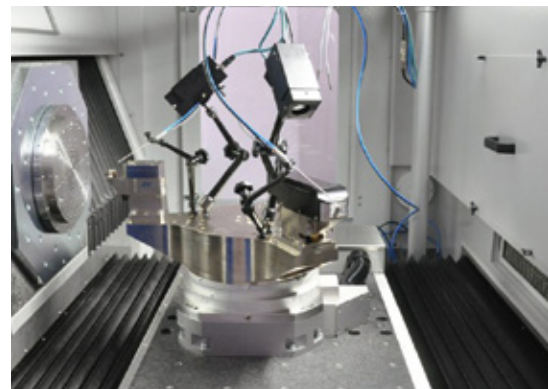




UP-turned freeform surface



Space mirror for the ARIEL mission, UP turning on MTC1800



Machining interior of MTC650

## Ultraprecision Turning Machines of the MTC Series

The turning machines (UP turning machines) of the MTC series (Micro Turning Center) are the result of our 30 years of experience and are specifically designed for the machining of the most demanding optical components.

### Highest Precision and Versatility

Using diamond tools, optical surfaces can be produced with the highest form and geometry requirements in non-ferrous metals such as brass, copper, aluminum, nickel-phosphorus, as well as plastics. Machining of steels is also easily possible.

Form tolerances of  $< 0.1 \mu\text{m}$  and surface roughness values typically between 1–2 nm (Sa) are achievable for components with diameters up to 1800 mm and beyond.

### Proven Across Numerous Industries

Our systems are already successfully used in the following sectors:

- Optics and Laser Technology
- Medical Technology, including Ophthalmology
- Semiconductor Industry
- Metrology
- Tool and Mold Making, Automotive
- Fundamental Research

## Unique Design

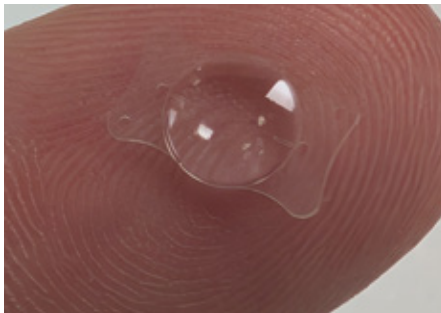
Our machines are characterized by the following features:

- Aerospace
- Natural granite base
- Hydrostatic bearings
- Direct drives
- Ultra-high-resolution measuring systems
- PLC with highest computational accuracy
- Various aerostatic workpiece spindles up to 10,000 rpm

If your requirements go beyond our standard machines, we are happy to develop customized solutions for you.

## Base Models from MTC250-C to MTC1800

Depending on your component range and dynamic requirements, we offer the right base machine. Starting with our MTC250-C, which has a very compact footprint for series production of small



Lens implant, UP-turned on MTC250-C

freeform parts, up to the MTC1800 for flat mirrors up to  $\varnothing 2 \text{ m}$  – the largest horizontal UP turning machine in the world.

- MTC250-Compact
- MTC250
- MTC350
- MTC650
- MTC1800

### Extensive Accessory Options

Our long list of accessory options helps you achieve the best possible results:

- Dynamic axis mode
- FastTool axis
- Integrated ultrasonic machining
- Integrated laser machining
- B-axis
- 3D probe
- LVDT probe
- Chromatic confocal sensors
- Tool measurement
- Automatic tool setting
- Cameras
- Process monitoring
- Balancing systems
- Automatic workpiece changer
- CAM systems
- Machine climate control ( $< 20 \text{ mK}$ )
- Minimum quantity lubrication

These are just some of the most commonly installed options. Contact us and our experts will work with you to create the perfect package for your production portfolio.

