We appreciate your interest in our company and hereby briefly introduce ourselves. Optico AG was founded in 1987 and has since well established itself in the market. Our optical production for the industry has specialized to the production of high-tech parts, primarily in the segment of prototypes, small and mid-sized series. Optico AG is characterized by a manageable, close at hand facilitated production, our creativity, dynamic approach and our diversified skills.

New extraordinary materials and special geometries are challenges we consistently welcome.
We produce optical components according to client drawings such as plane optics, spherical optics, prisms, wedges, Wafer and much more out of glass, sapphire, germanium or silicon.

Furthermore we are produce components like bonded elements, objektives, filters, mirrors, Laser optics, wafer supports, protective glass for combustion chambers, pressure drum windows, and custom tailored optical fibers, to mention some examples. Glass and ceramic components with free geometries are amongst out production portfolio. Of course we process and refine semi-finished products according to your requirements.

Our production counts on 20 experienced long-time staff and is based on extensive and modern machine equipment.
Sample products:

Optical fiber for sensoric, especially developed for this use with the client and produced by us.

Lenses for a wide-angle lens, diameters 4-12 mm. The front lens has a concave hemisphere. Completely manufactured and assembled.

Various raw-parts and technical glass components which will be finished at the client’s site.

Prism made of ULE-Glass® completely cut in one clamping; therefore highest preciseness of angles.
We process a great diversity of materials for our clients. The following list is not concluding.

**Glasses**
- Optical glass
- fused glass
- Borosilicate glass
- float glass
- Zerodur®
- ULE-glass®
- Absorbent filters
- …

**Crystals**
- Sapphire
- CaF$_2$
- MgF$_2$
- Germanium
- Silicon
- Yag
- …

**Ceramic**
- Macor®
- Aluminum oxide
- Silicon oxide
- Silicon nitride
- Zircon oxide
- …

Our material competence:

Image 1 bonded attenuation wedge made of neutral glass and optical class
Image 2 Sapphire lenses with complex geometries C-oriented with high optical requirements including a concave hemisphere. A lens for spacecraft, diameter 11-33 mm
Image 3 Ceramic components

Optico AG Bahnhofstrasse 24 CH-9475 Sevelen Tel.+41(0)81 785 2363 info@optico.ch www.optico.ch
Our CAD-CAM system allows generating a great diversity of geometries and the direct import and processing of client data-files.

Possible geometries:
- Plane surfaces
- Spherical surfaces
- Prism geometries
- Wedge planes
- Aspherical geometries
- Free form surfaces
- metered drilling from 0.5 mm on
- Pockets
- Relief grinding
- Channels
- Grooves
- Pins
- Thread in glass

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The manufacturing of parts with high quality requirements belongs to our core competences and is assured due to multi-level quality controls. During the production process an enduring quality monitoring is performed. Following this all parts are examined in a final quality control, during which the achievement of all specific data required of the part is controlled and documented prior to the dispatch of goods.

In order to enable the retracement of goods we provide our clients with all required documents, (i.e. melting certificate, material certificate, declaration of conformity, coating diagrams, certificate of origin, etc.).

Some examples of our quality values:
- RMS-value for surface processing <0,1nm
- Form-exactness Lamda/10 (possible even for sapphire)
- Best possible surface quality for reticule plates and laser optics

Image 1: Roughness profile of fine-polished optic with AFM.
Image 2: Interferometric measuring of glass membrane, total imperfection <Lamda/10
Image 3: Surface control with stereo microscope
We support you in the construction of optical components and systems, of glass and ceramic parts and generate solution concepts. We test manufacturing processes of single parts and if necessary provide you with suggestions to change in regard to the realizability and cost optimization. Whether prototypes, small or mid-sized series, we produce all parts for you accurately and corresponding to the drawings.

We mount assembly groups such as objektives, holders, sockets and produce complete optical components for you.

For further information, please do not hesitate to contact us. We shall be pleased to assist you.
Our core competences:

- Processing very thin glasses i.e. 0.05 mm fused glass/Zerodur®
- Processing of sapphire under consideration of technical form exactness and surface imperfections
- Processing of very hard ceramic materials (after sintering)
- Roughness values of <0.1nm can be achieved with the conventional manufacturing of super-polished surfaces,
- MRF-polishing (magnetorheological finishing) corrective polishing of spherical and plane surfaces
- Adaptation and reworking of customer substrates
- Due to our flexibility we can react to client demands on a short-term schedule
- We possess very extensive experiences in the processing of a large variety of materials and in the manufacturing of a range of diversified geometries

Image 1: Fused silica, sapphire and borosilicate viewing glasses for high temperature and vacuum processes, possible length up to 450 mm
Image 2: Fused quartz wafer support for the semiconductor industry, possible diameter up to 450 mm
Image 3: Fused silica window in reticule plate quality for sensoric applications
Highlights of our machine equipment:

**CNC-grinding machine**
- High frequency spindle
- CAM programmable
- Integrated measure sensing device for process control

**CNC-processing center**
- 5-achsles simultaneous processing
- High frequency spindle
- CAM programmable
- Large operation area

**Two-side grinding center**
- Air-supported material bearing spindles for extraordinary exact processing
- CAM programmable
- Automatic work piece exchange
- Automatic two-sided processing

**Inner Diameter Saw**
- Very exact cutting is possible
- Minimal cutting loss

**Double lapping and polishing**
- assures high planeness and parallelism values

**MRF-polishing machine**
- Corrective polishing of plane and circular optics
- Super-polishes
- Polishing rotation symmetric aspheres

**X-Ray goniometer**
- Orientation of mono-crystals
- Exactness 0.1°

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Image 1: Complete processing of lenses
Image 2: MRF-polishing, corrective polishing up to Lambda/10
Image 3: Definition of crystal orientation with a X-Ray goniometer

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We are proud of our reference list! Amongst our world wide spread clients you find:

- Universities
- Technical colleges
- Research centers and institutes
- Aerospace companies
- Innovation centers
- High temperature research institutions
- Constructing engineers and developers

We supply to Industry companies of various branches, i.e.:
- Facility and machine construction
- Laser technology
- Semi-conductor industry
- Medical equipment technology
- Measure and sensor technology
- Textile machine manufacturers
- Aerospace industry
- Lighting technology
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How to find us

[Map of Switzerland showing the location of Sevelen]

Sevelen
Optico AG
Gare CFF Sevelen
Motorway A13
Direction to Buchs SG
To Vaduz
Direction to Trübacher
Direction to Sargans