ProACT

PROFESSIONAL ADJUSTMENT & CORRECTION TOOLS

**Optical Manufacturing Solutions.**

satisloh®

ProACT

SOFTWARE PLATFORM FOR ALL OPTICAL SURFACES

Today's highly precise optical components require multiple software-supported manufacturing, measuring and correction steps, especially when it comes to complex shapes. In order to streamline and simplify the production process, Satisloh ProACT gathers all software-related manufacturing tasks into one platform. Instead of using several software programs with individual user interfaces, operators can perform all grinding and polishing correction tasks in one software environment, saving time and training efforts and thus reducing cost.
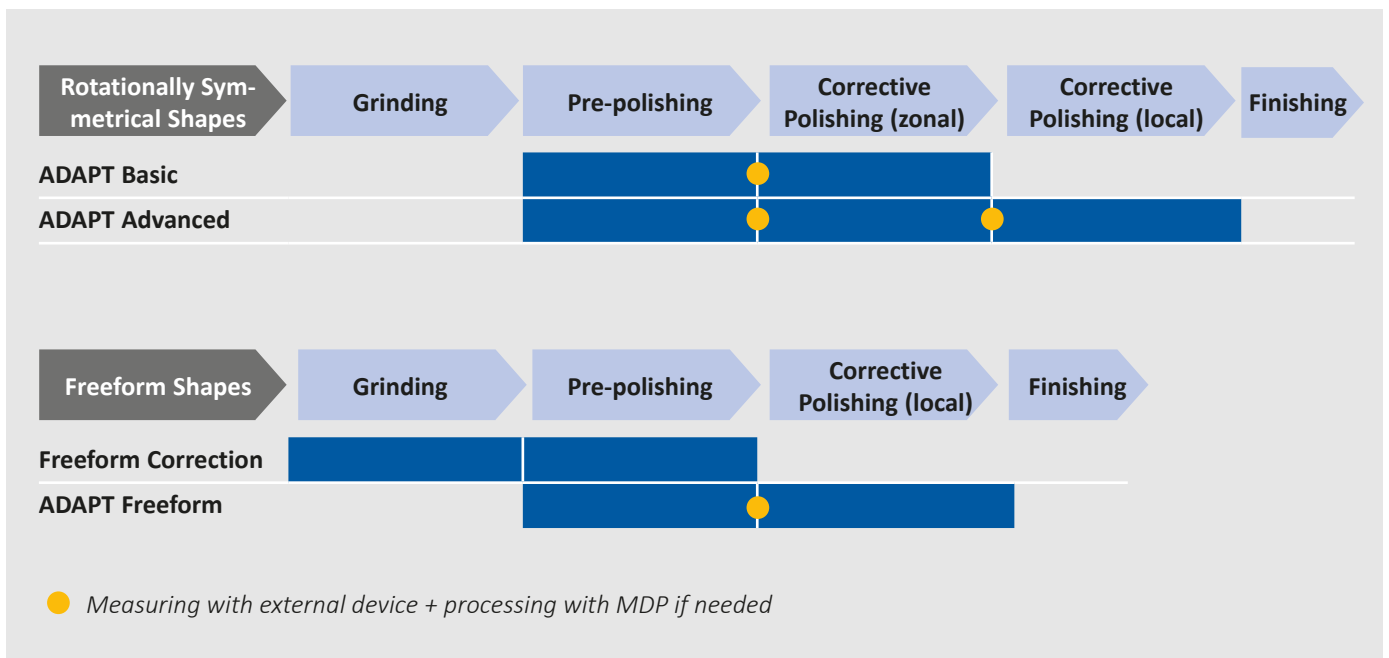
Satisloh ProACT (**Pro**fessional **A**djustment & **C**orrection **T**ools) is an offline, standalone desktop software platform that performs all calculation, adjustment and correction tasks required for grinding and polishing. It combines an intuitive and user-friendly operator interface with a vast amount of functions to further increase the quality of optical components, especially aspheres and freeform surfaces.
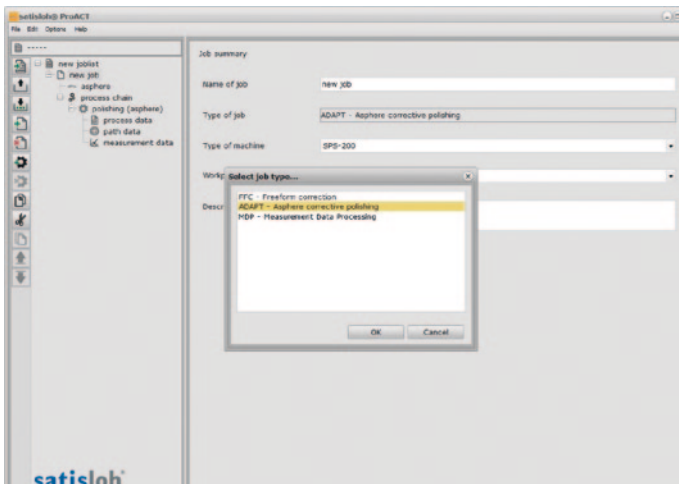
ProACT consists of three individually licensable software modules for different grinding and polishing tasks providing great flexibility. Modules can be chosen depending on actual needs and added as requirements grow. The user interface remains the same making operation easy and convenient for users and saving time for further training.
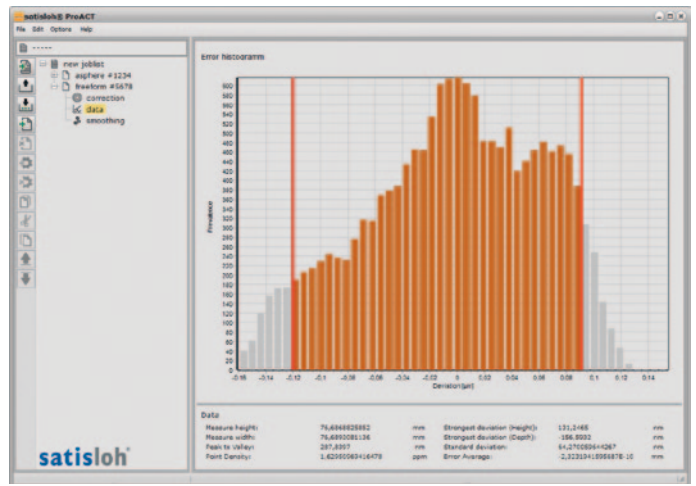
ProACT		
ADAPT	FFC	MDP
Basic Advanced Freeform*		
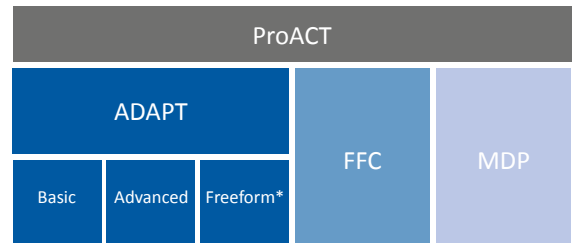
* in development

The ProACT Software modules, paired with the corresponding Satisloh BaSyS machine software, allows for seamless interaction between the machine and multiple metrology systems, thus lowering error rates and saving time in the manufacturing process.

Rotationally Symmetrical Shapes	Grinding	Pre-polishing	Corrective Polishing (zonal)	Corrective Polishing (local)	Finishing
ADAPT Basic					
ADAPT Advanced					

Freeform Shapes	Grinding	Pre-polishing	Corrective Polishing (local)	Finishing
Freeform Correction				
ADAPT Freeform				

● *Measuring with external device + processing with MDP if needed*

ProACT user interface with job overview

FFC error histogram, useful for filtering measuring peaks

ProACT MODULES

ADAPT
(Advanced Deterministic Adaptive Polishing Technology)

improves the precision and quality of aspheres and freeform surfaces with deterministic pre- and corrective polishing. The software calculates feed-rate optimized tool-paths based on lens shape (for example spiral/double spiral mode for aspheres and spiral, raster or meander mode for freeform shapes), tool geometry, process parameters, and measurement data from external devices.

ADAPT is available in three license levels: ADAPT Basic, ADAPT Advanced and ADAPT Freeform (in development, available in 2022), depending on workpiece geometry (rotationally symmetrical, e.g. convex, concave, aspheres, etc., or freeform shapes, e.g. toroids, cylinders, etc.) and required type of corrective polishing (zonal or local).

Satisloh machines supported:
GI-AP, SPS-200, SPS-125, SPS-50, SPS-10, and older Satisloh MTX controller based machines (please contact your sales representative)

FFC
(Freeform Correction)

prepares measurement data enabling the machine to automatically calculate correction surfaces when grinding freeform lenses. It contains different smoothing algorithms that are individually adjustable.

Additionally, FFC prepares measurement data to perform basic polishing corrections on freeform lenses. The module interfaces with all metrology systems of the best known manufacturers, including Ametek, Mahr, Zygo, and many others.

Satisloh machines supported:
GI/GI-AP, SPM/SPS-200, and older Satisloh MTX controller based machines (please contact your sales representative)

MDP
(Measurement Data Processing)

enables users to view, evaluate and manipulate 2D and 3D metrology data from various measurement devices. It supports inspection and evaluation of grinding and polishing results and provides processing functions to prepare data for subsequent processing steps to help improve final surface quality.

The functions include point-cloud/data creation, translation, rotation, filtering and resampling, as well as the combination and conversion of data.
MDP supports all other ProACT modules and imports data from metrology systems of manufacturers such as Ametek, Mahr, Zygo, and many others.
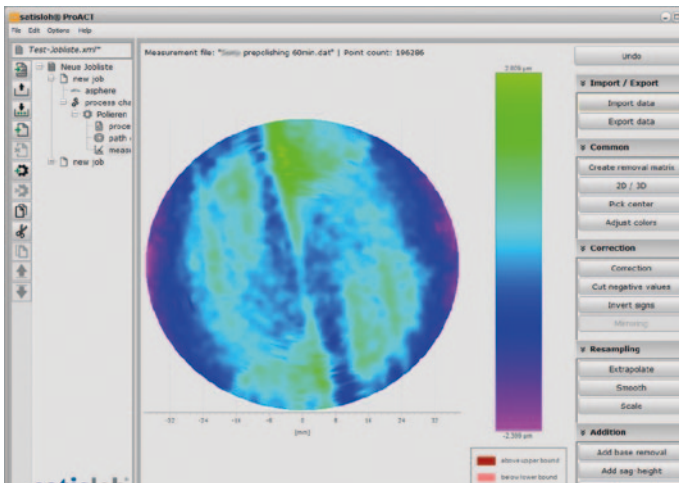
ADAPT measurement file
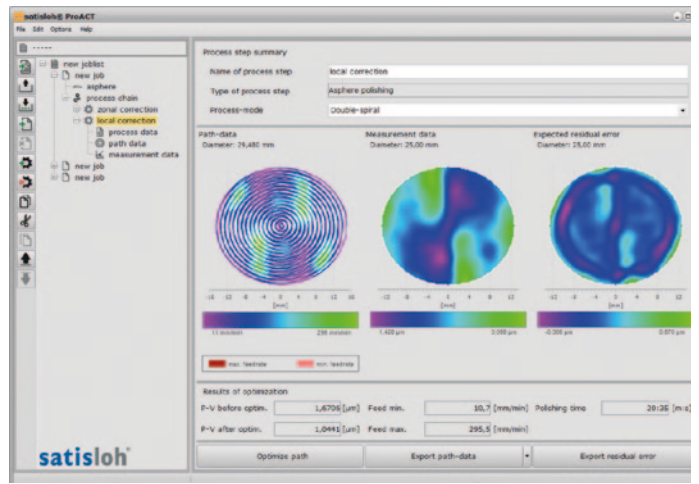
ADAPT Advanced: local corrective asphere polishing

TECHNICAL INFORMATION

Software Requirements:

- Operating system: Microsoft Windows 10, 64 bit (version 1909 or newer)
- Machine software: Satisloh BaSyS, version 5.3.2.0 or newer

Minimum Hardware Requirements:

- Processors: 1-GHz processor with 64 bit (x64)
- Main memory (RAM): 2 GB
- Permanent storage: min. 25 MB memory available*
- Graphics: min. 1024 x 768 pixels

Recommended hardware:

- Processors: 3.0-GHz processor (or faster), 8 cores (or more), 64 bit (x64)
- Main memory (RAM): 32 GB or more

Note:

The determination of the optimized ADAPT polishing path in Satisloh ProACT can be extremely memory and computationally intensive, depending on lens diameter, path and measurement data resolution. More CPU-cores and main memory improve determination of the optimized polishing path significantly

*Satisloh ProACT needs about 25 MB hard disk space for its installation. The effectively needed disk space for working with the software can be significantly higher (e.g. for saving measurement files with high resolution.

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