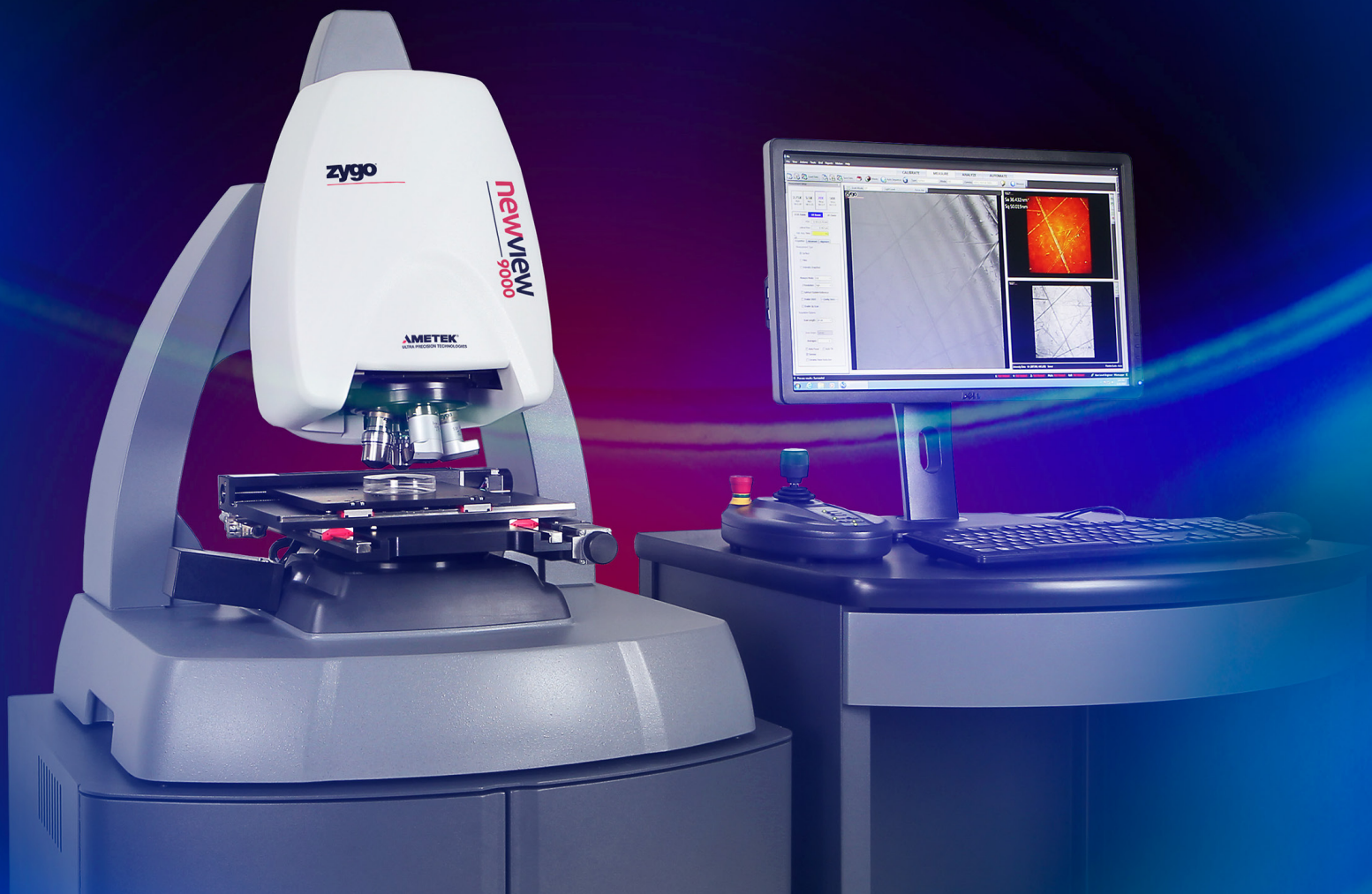




Newview™ 9000

**ZYGO'S MOST ADVANCED NON-CONTACT BENCHTOP
SURFACE PROFILER**

An advanced non-contact 3D metrology tool for surface applications demanding precise quantitative, topographic, volumetric, and texture characterization.

HIGH-SPEED | ROBUST MEASUREMENTS | FULL 3D VISUALIZATION

zygo
AMETEK

The latest edition in the field-proven leader in 3D surface profilers

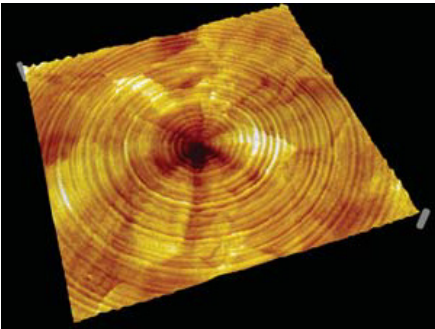
Full 3D visualization of virtually any surface: Topography and texture on rough, polished and highly sloped surfaces—even transparent films

Robust measurements—new technology reveals topography data nearly everywhere there is a feature, even on rough and angled surfaces

Fast—sub-nanometer vertical resolution at high speeds, independent of magnification

Proprietary Zygo technology enables the NewView 9000 to push beyond the traditional limits of interferometric profilers— to provide meaningful height data virtually everywhere there is a sample, even on extremely rough, low reflectivity, and highly sloped surfaces.

When combined with advanced techniques like SureScan™ technology, for robust performance even in the presence of vibration, this improved visualization and metrology capability provides an exceptionally powerful platform for surface characterization.



The NewView 9000 can analyze process fingerprints such as the post-turning structure of this nickel mirror.



Measure larger objects and highly sloped surfaces, like this US quarter (with over 25 million data points).

Advanced Design

Built-in measurement modes for rough, smooth and film surfaces

3-position image zoom turret for maximum versatility

Motorized or manual XY and tilt stages

Instrument stand for clean look and cabling control



Mx™ software—simple to use, easy to learn with powerful control and analysis tools

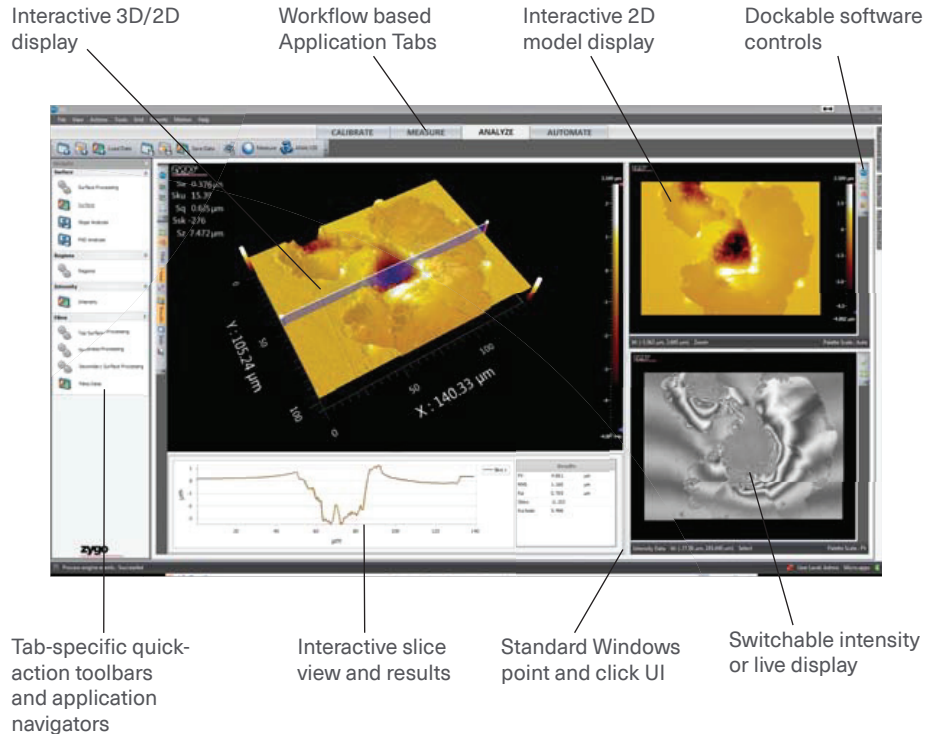
Open structure for great part flexibility

Intuitive software

THE NEXT STANDARD IN METROLOGY SOFTWARE: MX™ CONTROL AND ANALYSIS

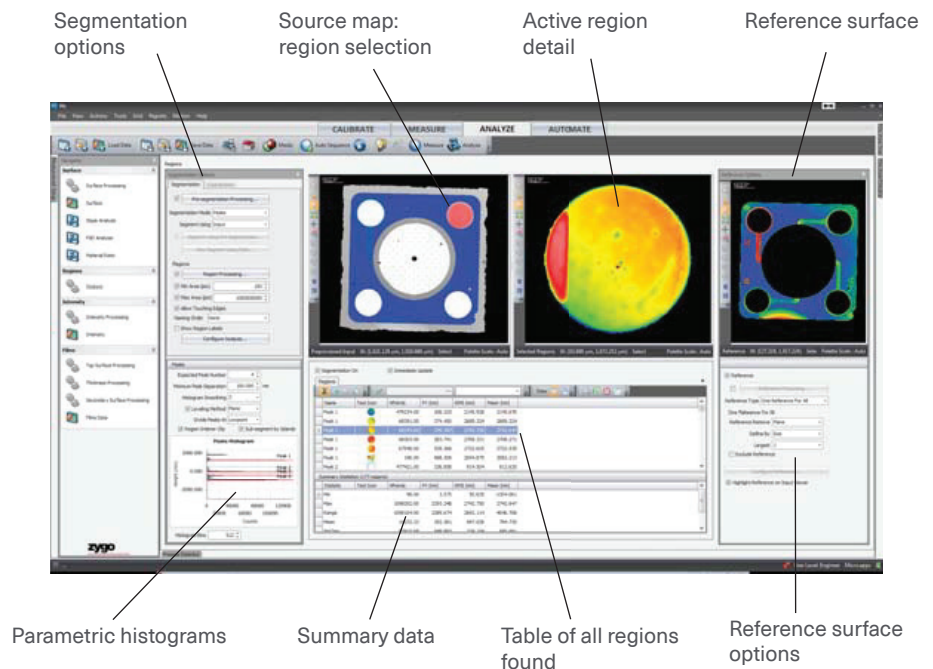
Mx software is Zygo's platform for instrument control and data analysis. Using a simple workflow based concept, users easily navigate the metrology experience from setup through analysis and reporting.

Interactive and detailed plots show full 2D or 3D data; profile slices, material ratio, slope analysis, and PSD views. With built-in SPC, pass/fail indication, data reporting and run charts, production quality analysis is simple.



REGIONS ANALYSIS

Regions analysis demonstrates the power of area measurements. In an individual data set, whether from a single field of view or stitched as a composite, regions that are separated laterally and/or vertically can be compared.



STITCHING AND PATTERNED SAMPLING

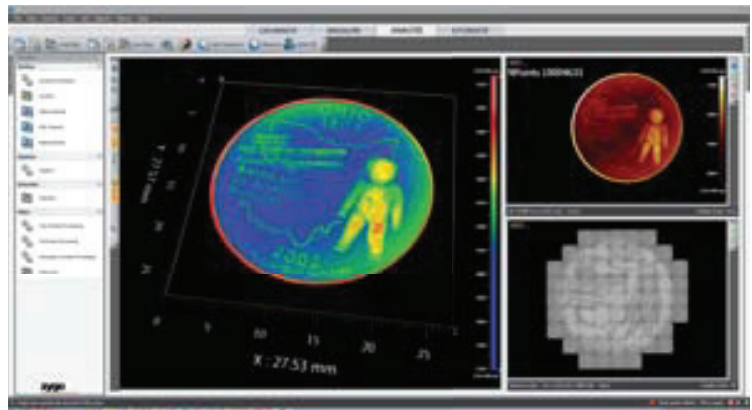
Stitching is a way of enlarging a field of view and increasing data density. With a motorized XY stage, adjacent fields-of-view are matched at their edges, and joined together into a larger image.

Pattern sampling uses Mx software capabilities of stage programming and data acquisition with automated stages. Stitching and pattern sampling require motorized staging options.

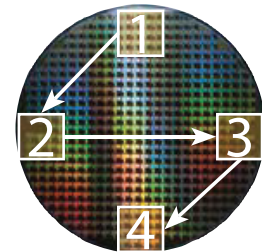
Stitching with the NewView™

9000 profiler allows you to explore surfaces at high magnification with high data density.

Pattern sampling is measuring different locations on the stage, such as a tray of samples or evaluating different areas on a larger object.



1	2	3	4	5	6	7	8	9
10	17	16	15	14	13	12	11	10
19	20	21	22	23	24	25	26	27
36	35	34	33	32	31	30	29	28
37	38	39	40	41	42	43	44	45
54	53	52	51	50	49	48	47	46
55	56	57	58	59	60	61	62	63
72	71	70	69	68	67	66	65	64
73	74	75	76	77	78	79	80	81



The Stitching Preview eliminates stitching grid guesswork

Automated sampling at each location results in multiple measurements from one loading of the stage

Flexible Configurations

Gantry Risers

Optional 35 mm (1.3 in.) and 176 mm (6.9 in.) base riser kits work with the included 75 mm head riser to increase standard work volume by more than 9 inches, to enable access to very large parts and deeply recessed surfaces.

Software

Additionally, optional software licenses for vision analysis and transparent films analysis enable multifunctional tool use for a wider variety of applications such as materials characterization, precision machining, prosthetics, MEMS, semiconductor, consumer electro-optics, and optical surface manufacturing.



Objectives

Zygo maintains the largest selection of interferometric objectives among available optical surface profilers, with standard working distances up to 40 mm and custom configurations in excess of 50 mm.

Available objectives include:

- Standard working distance objectives from 1× to 100× magnification. Our 100× objective with 0.85 NA has the finest optical resolution of any interferometric profiler.
- Long working distance (LWD), and super long working distance (SLWD) objectives from 1× to 10× magnification.
- Specialized glass compensated (GC) objectives enable sample observation through a transmissive window.

Largest selection of objectives available in optical metrology_

OBJECTIVE WORKING DISTANCE (mm)

Magnification	1x	2x	2.75x	5x	5.5x	10x	20x	50x	100x
Michelson/Mirau Standard working distance	-	-	4.5	-	8.0	7.4	4.7	3.4	000
Long Working Distance	8.0	21.0	-	21.0	-	19.0	-	-	-
Super-Long Working Distance	40.0	-	-	40.0	-	-	-	-	-
Glass Compensated	-	18.5	-	19.0	-	18.0	-	-	-

ACCESSORIZE YOUR NEWVIEW 9000 PROFILER

Accessory	Description
Workstation	Side desk designed to complement the system and accommodate the monitor, keyboard, mouse and joystick pendant with convenience drawer and cable management
Objective turret	4 position, motorized and encoded - Various objective mounting and parfocal adapters available
Calibration standards	- Step-height: 0.088 μm, 1.8 μm, and 25 μm - SiC Reference Flat: choice of 30 mm and 50 mm diameter - Lateral: Standard and high-precision versions
Gantry risers	35 mm and 176 mm riser kits
Sample holders	150 mm square vacuum holder

Features

- CSI technology provides maximum application flexibility—for surface heights from angstroms to millimeters
- SureScan™ technology enables precision metrology in vibration-prone environments
- Smart PSI technology enables sub-Å surface metrology in seconds
- Correlation to 2D and 3D standards with ISO 25178 compliance
- Streamlined Mx™ software
- Built in pass/fail, SPC, reporting, & statistics
- Open structure provides clear part visibility and access with large work volume (H x W x D)
 - 89 x 150 x 150 mm (standard system)
 - 265 x 150 x 150 mm (system w/ optional 176 mm riser kit)
- Built in 75 mm head riser
- Optional thick films analysis for transparent films > 400 nm thick
- Optional 2D analysis Vision Software Suite

Performance

Surface Topography Repeatability

- 0.08 nm for all magnifications

Repeatability of the RMS

- 0.008 nm

Sample Stage

- Manual XY: 100 mm travel
- Motorized XY: 150 mm XY travel
- Tilt: +/- 4° tilt

System Options

- Manual, motorized, and encoded stage options
- Available built-in vibration isolation
- Instrument stand with seismic restraint locations
- Discrete optical image zoom lenses

Physical Characteristics

Dimensions (H x W x D)

- 75 x 64 x 56 cm (benchtop mainframe)
- 151 x 73 x 61 cm (with stand)

System Weight

- 91 kg benchtop configuration
- 229 kg with stand configuration



Zygo
 21 Laurel Brook Road, Middlefield, CT 06455 USA
 +1 860.347.8506
 zygo.info@ametech.com
zygo.com

