

NEW PRODUCT ANNOUNCEMENT

We are pleased to announce the addition of the enhanced Mitutoyo FORMTRACER Avant Series Contour and Surface Roughness Measuring machine to our vast lineup of metrology products.

The FORMTRACER Avant is Mitutoyo's next generation Formtracer Measurement measuring system that measures advanced contour and surface roughness features with high precision, speed, flexibility and efficiency in one machine. The new FORMTRACER Avant Series enables conversion between contour and surface roughness



FORMTRACER Avant Summary

- NEW quick sensor exchange without turning off machine
- NEW enhanced stylus protection function
- Increased drive speed on X and Z axes
- NEW faster retraction of the stylus after measurement (58% improvement)
- Increase in the amount of retrofit selections of optional surface/contour detectors
- Easier part programming with the addition of new operation keys added to remote joystick box

Quick Sensor Changing

The FORMTRACER Avant has updated the ability to "Hot Swap" between surface and contour detector heads. This feature improves the process and allows for faster, more efficient operation of the measuring program as described below:

- Eliminates the need for tools & powering off the control unit to change detectors
- Positioning pin ensures accurate placement
- Provides a 70% time savings over previous models
- The exchanged detector automatically recognizes the software seamlessly



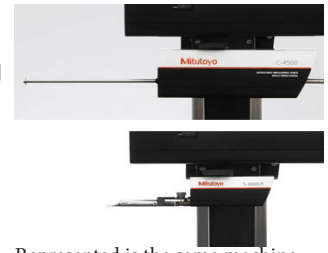
Stylus Protection

The C-4000 detector offers a new stylus protection function which controls the downward movement of the stylus. By utilizing the Mitutoyo FORMTRACEPAK software, the downward motion is slowed when dropping off an edge during measurement. The measurement operation will stop when a sudden stylus drop is detected allowing the drop rate to be more controlled to prevent breakage of the stylus.

Add/Retrofit Surface & Contour Detectors

All of the FORMTRACER Avant series models can be upgraded and retrofitted with optional detectors for better measuring application versatility. A base contour measuring unit or a surface roughness tester can be upgraded to a high-precision dual measuring system for both. These options include:

- Adding a contour measuring detector on standard surface roughness models
- Adding a surface roughness detector on standard contour measuring models
- Adding other optional roughness detector holders for orientation on standard roughness models



Represented is the same machine with two different types of detectors

Easier Operation & Programming Via Joystick Box Buttons

New operation keys have been added to the Remote Joystick Box making part programming and work piece set up easier than ever before.

- One-touch part program key assists creation of part programs
- Button functions replace the need for manipulating the software
- Contour stylus direct change now performed with an Operation Key



Higher Speeds

The FORMTRACER Avant Series has the best-in-class drive speed for the drive unit and column axis along with a quick stroke return speed. This higher speed drastically reduces the total set up time, improving measurement efficiency and greatly increasing throughput.

- Drive-unit's X-axis movement speed: 80mm/s (MAX)
- Column vertical Z2-axis movement speed: 30mm/s (MAX)
- Retraction speed of the stylus arm on the enhanced Avant Series is 58% faster than previous models
- Positioning distance is reduced to its limit of 0.05mm, best in the industry

Versatility

The FORMTRACER Avant Series is one of the most versatile measurement machines of its kind. Along with the innovative, time-saving detector "hot swapping" feature, the new Avant Series applies many other intuitive features to make this machine a revolutionary measuring system.

- X-axis drive inclines ± 45 deg. to efficiently measure inclined surfaces without added fixtures
- Continuously measure upper/lower surfaces using Mitutoyo's double-sided conical stylus
- Wide variety of optional accessories supports ability to measure nearly any type of workpiece

We thank you for your continued support and patronage of Mitutoyo America Corporation equipment and products.

Sincerely,

A handwritten signature in black ink, appearing to read 'Todd Himes'.

Todd Himes
National Sales Manager Major Instruments
Mitutoyo America Corporation