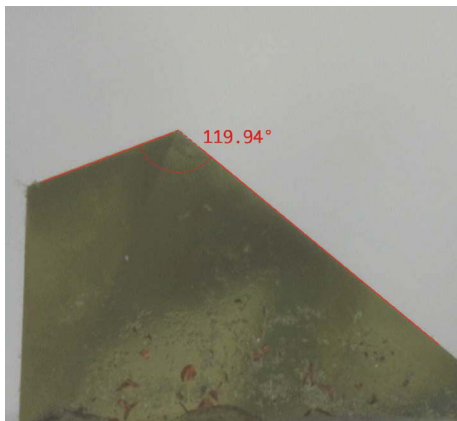# VERTEX

Vertex Stylus Monitoring System

Control and consistency is something electromechanical engraving provides with digital accuracy, but what if your stylus angle changes? Increase the repeatability and consistency of your engraving by tracking your stylus. The Vertex Stylus Monitoring system provides a simple and fast way to monitor the stylus angle, and bring a new level of uniformity to your engraved cylinders.
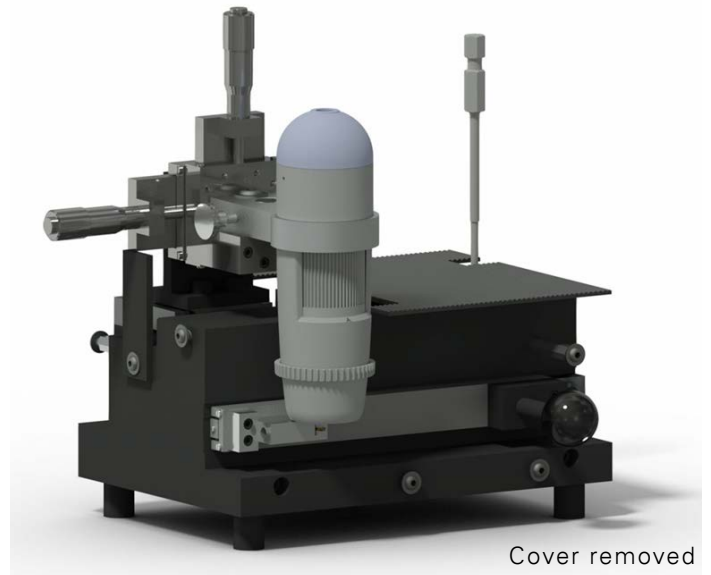
The Vertex Stylus Monitoring system, or VSM, uses a total system approach to maintaining cell volume, a key element to repeatability of cylinders. Highlight and mid-tone cells are easily affected by stylus wear, which varies the cell volume. Focusing on the cell volume, and not just cell size, leads to consistent first-time or repeat cylinders.

The process starts at the VSM microscope where stylus angle is measured and recorded against the stylus serial number. The microscope takes advantage of the cartridge stylus design; you can measure and record multiple styli quickly and easily. This data is stored in a central library where Prism and Spectrum engravers can retrieve the common data. This means a stylus is available to any machine.
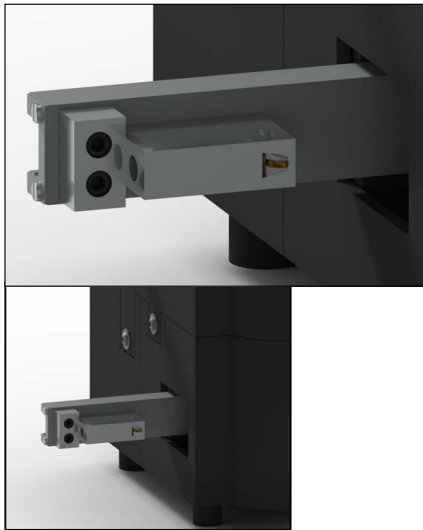
With a stylus selected at the engraver, the cell volume is determined through the knowledge of the actual stylus angle, and cell specifications and profile. This volume is compared with that of a new stylus. The VISTA system uses this data, making adjustments to the cell setup to compensate and maintain cell volume. This provides consistent printing results in the highlight and mid-tone ranges where stylus wear has the biggest influence.

OHIO GRAVURE TECHNOLOGIES

VERTEX
STYLUS MONITORING

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The entire Vertex Stylus Monitoring system consists of three primary items:

- The Vertex microscope - Designed for measuring the cartridge stylus used with VISION 3 engrave heads.

- A Windows-based computer with VSM software - For measuring and storing the stylus information.

- Embedded engraver software with a new VISTA algorithm to calculate cell volume.

The stylus table available on the engraver lists the measured stylus angle, serial number, and the engraving time for the stylus. The color code identifying the stylus angle is also shown for easy grouping. An image of the stylus from the last measurement is also stored for viewing at either the PC or the engraver.

Ohio Gravure Technologies

Stylus Angle		Serial Number	Time (hour:min:sec)	Selected	Preview
⬛	110.4	70109	65:31:14		
⬛	110.1	5163	18:29:07		
🟪	115.2	5164	16:20:07		
🟦	120.4	82296	62:15:24		
🟦	120.2	82297	00:38:19	YES	👁
🟦	120.2	95120	01:03:54		
🟦	120.0	95121	00:00:00		
🟦	119.9	95122	00:00:00		
🟩	125.5	20947	75:46:00		
🟥	130.2	20948	00:45:52		
🟥	130.6	8197	209:54:37		
🟥	130.1	8201	82:57:04		
🟨	134.9	18249	00:00:00		
🟨	135.0	18250	00:00:00		
🟧	140.3	14883	48:17:27		

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