

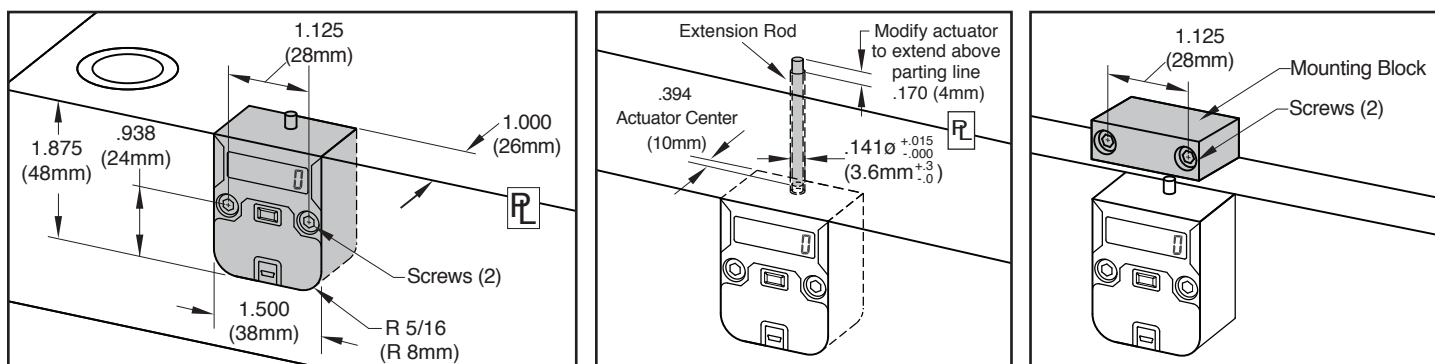
CVe MONITOR®

Expanding the line of mold monitoring solutions, the new CVe Monitor v2 tracks tool activity, allowing users to view data on the display or from comprehensive reports using OnDemand or the new CVe Live System. Features include:

- 7-digit LCD display with a push button to move through the display modes.
- 4GB flash drive for file storage and 4+ year battery within monitor.
- Water resistant with an ingress protection rating of IP52.
- Maximum temperature: 190° F (90° C).
- Dimensional compatibility with mechanical CounterViews.
- Mini USB connectivity for data retrieval with cables sold separately.



MOUNTING OPTIONS



CATALOG NUMBER	DESCRIPTION
CVe-M	CVe Monitor v2 Mold Maker/Molder version including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)

OEM-specific CVe Monitors are available with additional features. Visit CVeMonitor.com to locate your local distributor for more information.

CATALOG NUMBER	DESCRIPTION
CVe-INT	Internal Extension Rod (8"/200mm) including a hex key for CVe Monitor set screw removal.
CVe-EXT	External Mounting Block including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)

How to Order:

- For installation below parting line (ie. rails as shown in the center graphic above), order (1) CVe-M and (1) CVe-INT.
- For installation outside of the mold (right graphic), order (1) CVe-M and (1) CVe-EXT.

ON-MOLD DISPLAY MODES

Each device is provided at -25 cycles to allow for mold set up and initialization of the CVe Monitor. Once it reaches 0, all timers and data will reset on the monitor. During production, users can press the button on the front of the monitor and review the following information on the display:

Cycle Count

Total cycles for the life of the mold is presented on the main screen of the CVe Monitor.



Cycle Time

Since the first production cycle, the cycle time is shown in seconds for the life of the mold.



Cycle Time-Recent

Cycle time for the past 25,000 cycles.



Efficiency Percentage

The percentage of time that the mold has been actively cycling vs being idle.



Efficiency Percentage-Recent

The percentage of time the mold has been active in the past 25,000 cycles.



Cycle Count Reset

A separate counter that can be reset to 0 for interim monitoring of cycles when pressed and held.



Users can utilize the 4GB flash drive on the CVe Monitor by connecting the device to a PC / Tablet using an industry-standard mini USB cable, sold on the next page. Users press the button to get to the flash drive mode and then the storage area is represented on the PC / Tablet by a new drive letter.



Patents in Europe, Asia, and USA are granted and pending.
CVe Monitor is a trademark of AST Technology.



CVe MONITOR

ALERT MODE

Once data is initialized using the OnDemand software, users will be alerted to different modes on the device:

Preventive Maintenance

During initialization, the initial preventive maintenance point and the PM interval are entered and saved onto the CVe Monitor. Then, when the PM is within 10% of the initial point, the display will flash "PM Due" as shown at right. Users can then 'snooze' the alert by holding for 2 seconds, returning it to Total Cycles.



When a PM is performed using OnDemand and noted as such, the date/time will be written to the CVe Monitor and then the alert is stopped- until reaching 10% of the next PM point. If no PM is performed, the CVe Monitor will continue to alert the user until snoozed or the PM is ultimately recorded.

Low Battery

The CVe Monitor has a battery life of approximately 4.5 years in typical molding environments where temperatures are controlled. When the battery is within 6 months of its expected end of life, the display will flash as shown at right. Users can then 'snooze' the alert by holding for 2 seconds, returning it to the Total Cycles. The alert will appear every 30 days as a reminder to transfer the stored data to a new CVe Monitor.



RETROFITTING AND REMOVAL

Users can view additional data by double-clicking the button on the monitor:

Retrofit CVe for CounterView Tools

During initialization, molders can start the cycle count with the tool's actual cycle count from an existing CounterView or known cycles from maintenance records. Once entered, the user can see the total cycles for the tool, which includes the count of the cycles from the counter and those run with the CVe Monitor.



In the graphic at right, the tool had 1,000,000 cycles on it originally, but ran 507,288 after the CVe Monitor was installed.



Removal Monitoring

When the CVe Monitor is removed from the tool for any reason (ie. cleaning) the pins on the back of the device will record an event of its removal. After viewing the retrofit number above, the display will move into the screen shown at right, designating the number of times the monitor was removed from the mold.



CABLES AND CONNECTIVITY

OnDemand Activity Log [Software Version 2.0/2.0.1/2.2]												
C\Ve Initialize Date	May 27, 2013	June 20, 2013										
Device ID	MX1234	MX1234										
Tool ID	85658	85658										
Blower Housing	Blower Housing											
Part ID	ABT57	ABT57										
Program Name	Mocha	Mocha										
Customer	Crimson Fan	Crimson Fan										
Target Efficiency %	N/A	94%										
Target Cycle Time	N/A	7.5										
Initial PM Point	50000	50000										
Target PM Interval	100000	100000										
Cycles Prior to C\Ve Installation*	0	0										
DEM ID	N/A	ABT1										
Asset ID	N/A	0356-5686										
Reason for connecting C\Ve Monitor												
Date/Time	Battery	Cycles	OD User	Conn. By	Company	Destination	REV	PM	GEN	REPAIR	Notes	
April 7, 2014	OK	507,288	INJECT1	Blake Fitz	Injection Tech	Crimson@crimson.com	N	N	Y	N	0	Replaced damaged core pin in cavity 4
April 7, 2014	OK	506,524	INJECT1	Blake Fitz	Injection Tech	Crimson@crimson.com	N	N	Y	N	0	Done Pull
March 23, 2014	OK	491,274	INJECT1	Blake Fitz	Injection Tech	Crimson@crimson.com	N	N	Y	N	0	Pulled from production for mold operational issues. It is being sent for evaluation and rework
March 19, 2014	OK	482,567	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Full PM: Cavity #2 was shut off
December 30, 2013	OK	364,001	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	1	Full PM
December 2, 2013	OK	314,856	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Full PM
October 30, 2013	OK	260,002	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Full PM: Cavity #2 was shut off
October 6, 2013	OK	211,563	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Full PM
September 23, 2013	OK	193,268	INJECT1	Blake Fitz	Injection Tech	Crimson@crimson.com	N	N	Y	N	0	3 cavities are shutdown. Pulled for evaluation and repair
August 11, 2013	OK	106,235	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Full PM
July 14, 2013	OK	58,725	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Full PM
June 20, 2013	OK	9,265	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	Y	N	N	0	Initial mold inspection. There is no wear or damage to mold following initial run. Targets are set. Mold is released for production
May 27, 2013	OK	0	MOLDHOU1	Chuck Louise	Mold House	Crimson@crimson.com	N	N	Y	N	0	Mold is completed and released for sampling

Above: OnDemand allows users to view data and keep a record of reports run, outlining the reason for the report generation including PM, General Queries, Revision Changes, and Repairs. Notes can be included and OnDemand records the person generating the document for accurate history.



CABLE CATALOG NUMBER	DESCRIPTION
CVE-USB-6	USB 2.0 to Type B Mini, 6 Ft Long
CVE-USB-15	USB 2.0 to Type B Mini, 15 Ft Long

Above: Cables are available for use with the CVe Monitor and are required for both connecting to the computer for OnDemand and for the CVe Live system.

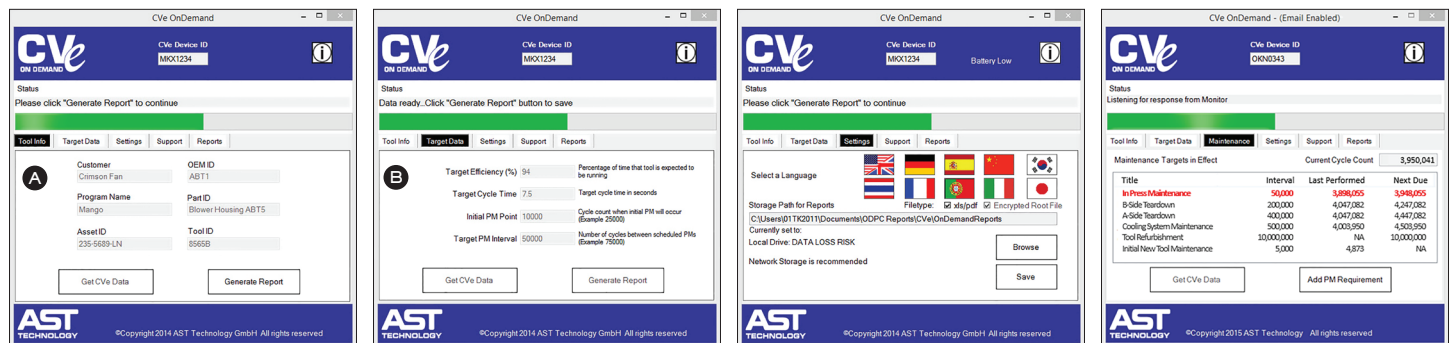
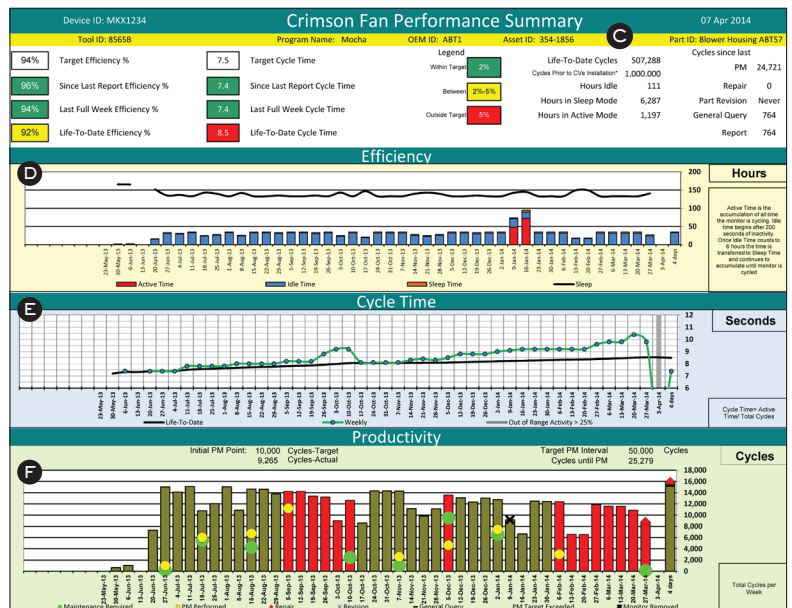
CVe ON DEMAND®

Drive comprehensive reporting using data from the CVe Monitor when running OnDemand software, available at no charge from CVeMonitor.com.

OnDemand software enables the user to generate Adobe Acrobat (.pdf), Excel (.xls), and encrypted (.enc) reports to share with customers and other colleagues with these metrics:

- A:** When the CVe is initialized, users can identify their tool and align with the device serial number which is tracked on reports utilizing different field options.
- B:** The target cycle times and efficiency percentages can be entered. OnDemand also supports ten languages: English, German, Mandarin, Spanish, French, Italian, Japanese, Korean, Portuguese and Thai. Reports, generated in the chosen language, compare actual values to targets, providing a quick view of any variances.
- C:** Statistics are provided to show quantity of total cycles and inactivity for the life of the tool.
- D:** Weekly sessions are presented graphically to show production efficiency levels.
- E:** Weekly cycle time tracking identifies tools with variances over the past year.
- F:** The productivity portion of the report takes the target preventive maintenance (PM) points set by the molder and compares them to actual maintenance pulls.

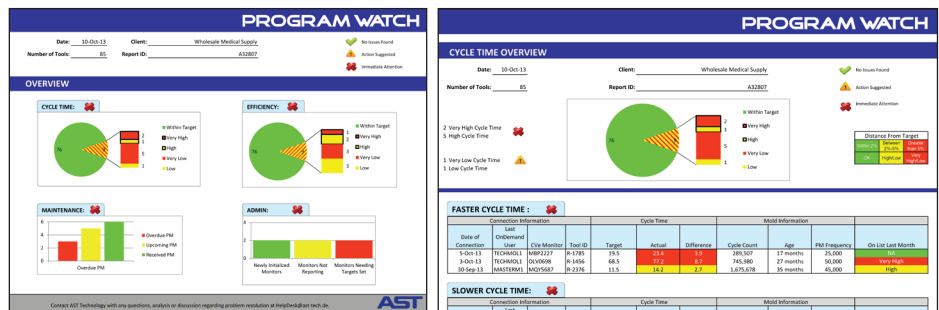
The New Maintenance Tab has 9 user-definable PM points (Incremental or Absolute). It provides an overview of when each type of PM was performed to a tool and when it is next due. It also allows the user to customize PM forms and checklists for their maintenance program.



PROGRAM WATCH™

OEMs and tool owners can view details and variances on their tools by purchasing the software Program Watch from AST Technology.

For more information, contact your account manager, Customer Service or email AST directly at orderdesk@ASTtech.com



CVe LIVE®

For real-time monitoring of tools, AST provides hardware and web-site access for OEMs and molders utilizing the CVe Monitors.

Features:

- Utilizes FCC and CE certified internal components.
- Press Modules act as a node on a network, reducing the distance required in the plant for data submission to the Gateway.
- Radio Frequency (RF) antennas are interference-free in typical molding environments.
- Designated website for data collection, reporting, and file storage.



Press Module

- 1 per press connects to the CVe Monitor via cables
- Power supply (US/International) included
- Sends data to the Gateway continuously
- Serves as a node on the network for tools running with a CVe Monitor

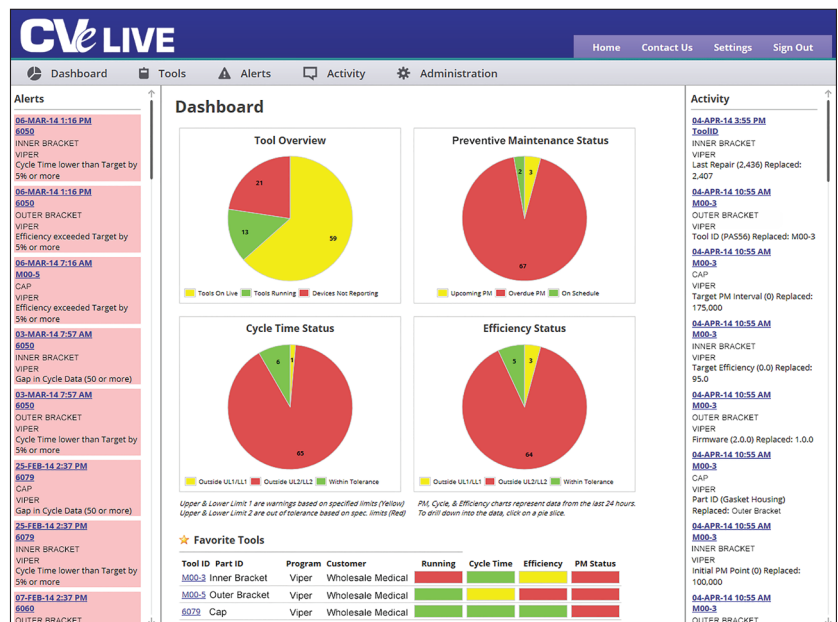


Gateway

- 1 per facility collects data from all press modules installed via RF transmissions
- Power supply (US/International) and CAT5 Ethernet cable included
- Accesses the internet, and AST technicians will work with the IT departments for installation
- Sends data to the website every 15 minutes

CVe Live Website Features:

- Secure access for OEMs and molders, set up at the time of installation of the CVe Live hardware.
- The dashboard gives information at a glance and allows for drill down into specifics on each tool.
- Users can mark favorites and also save searches for monitoring specific programs or suppliers.
- Graphs for cycle times, efficiencies, cavitation and production loss, and also preventive maintenance, can be shown and saved.
- PM Function allows for user-defined PM stops (Incremental or Absolute). The user can also create or customize PM forms and checklists for a specific maintenance program.
- Asset Tracking shows where and when the CVe Monitor was last tethered to a CVe Live network.
- Molding data and tool information can be exported to Excel, allowing for easy import into existing systems.
- Administration and security levels are controlled by the user, and access can be given to subcontractors to upload information or to initialize the CVe Monitors to begin submitting data.
- The file cabinet system is designed to store reports, tool and part drawings, and set-up sheets and can be utilized by customers with the CVe Live system installed, or by those using OnDemand who are looking to have or give global access to tool information.



For a CVe Live installation or for CVe Live website access, contact your account manager, Customer Service, or email AST directly at orderdesk@ASTtech.com.