Productivity Solutions...

PROGRESSIVE COMPONENTS

MOULD & DIE SOLUTIONS

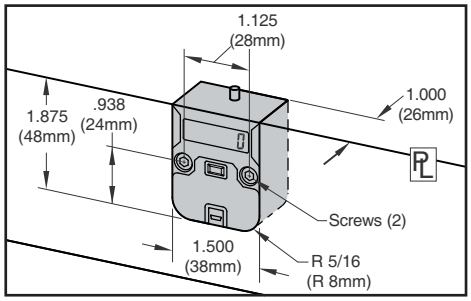
THE ALL NEW CVe MONITOR®

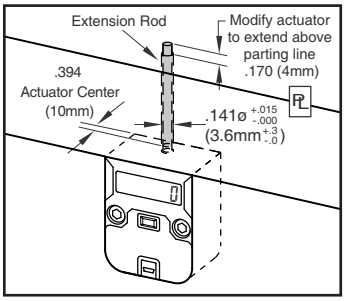
- Version 3

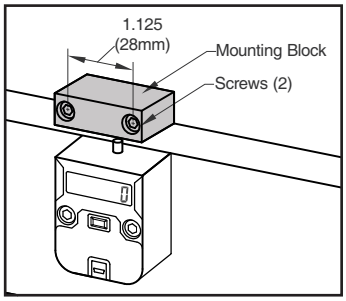
Progressive's new CVe Monitor v3 tracks tool activity, allowing users to view data on the display or from comprehensive reports using OnDemand or the new CVe Live System. Features include:

- 7-digit LCD display with a push button to move through the display modes.
- 16GB flash drive for file storage.
- Replaceable battery.
- Water resistant with an ingress protection rating of IP58.
- Maximum temperature: 190 ° F (90 ° C). For high temp tools, contact Engineering.
- Recommended mounting is on the stationary half of the mold.
- Dimensional compatibility with Progressive's mechanical CounterViews.
- Mini USB connectivity for data retrieval with cables sold separately.

mounting options







catalog number	description
CVE-M	CVe Monitor v3 Mold Maker/Molder version including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)
CVE-O	CVe Monitor v3 OEM version including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)

OEM-specific CVe Monitors are available. Contact Progressive 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 zero (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.

Cycle Time
Since the first production cycle, cycle time for the life of the mold.

Cycle Time-Recent
Cycle time for the past 500 cycles is shown in seconds.

Mold Temperature
View current temperature experienced by the monitor (°C) by pressing button twice.

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 500 cycles.

Cycle Count Reset
Press and hold button to reset separate counter to 0 for interim monitoring of cycles.

Flash Drive
Utilize the 16GB flash drive by connecting the CVe to a PC/Tablet with an industry-standard mini USB cable, sold on the next page .

US Patents: 8,899,955 & 8,883,054
European and Chinese patents applied for and issued.

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Email: info@m-d-s.co.za
Tel Gauteng: 010 410 5350
Cape Town: 021 555 2701
www.m-d-s.co.za

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CVe Monitor®

on demand alert modes

Once data is initialized using the complimentary OnDemand software (from www.CVeMonitor.com) users can choose to be alerted to the following sets of conditions for the CVe Monitor.

Preventive Maintenance
During initialization, Preventive Maintenance (PM) checkpoints are entered and saved onto the CVe Monitor. If a PM checkpoint is exceeded, the CVe Monitor enters the PM alert mode and displays the wrench icon as shown at right. When a PM is performed using OnDemand, the next checkpoint for the PM will be written. If no PM is performed, the CVe Monitor will remain in PM alert mode until the user performs all PMs whose thresholds have been exceeded.

Cycle Time
During initialization, the target cycle time can be written to the monitor using OnDemand. Any variation greater than 2% from the target will enter the alert mode and display the clock icon as shown at right. When the cycle time returns to within 2% of the target, the alert is removed.

Efficiency
During initialization, the target efficiency can be written to the monitor using OnDemand. Any variation greater than 2% from the target will enter the alert mode and display the percentage (%) icon as shown at right. When the efficiency returns to within 2% of the target, the alert is removed.

Low Battery
The CVe Monitor has a battery life of approximately 4 years in typical molding environments where temperatures are controlled. When the battery reaches a specified level, the display will show a battery icon as shown at right. This is the indication to replace the battery, which can be ordered by contacting Customer Service.

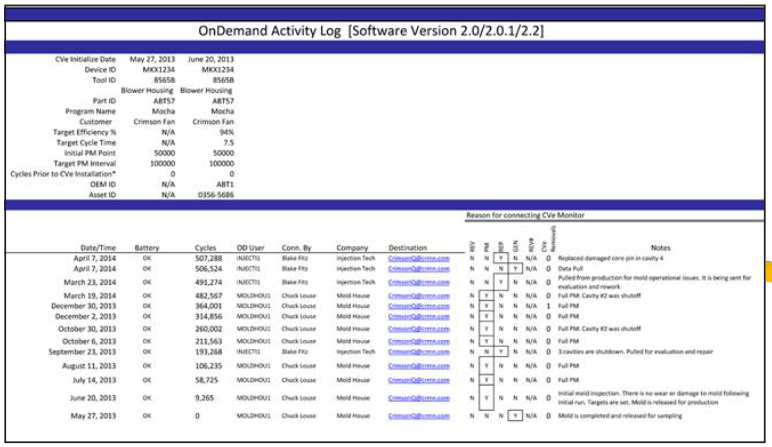
retrofitting

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.

cables and connectivity



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
CVEL-DATA9	USB 2.0 to Type B Mini 9 Foot Long, Right-Angle Cable

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.

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CVe Monitor®

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.

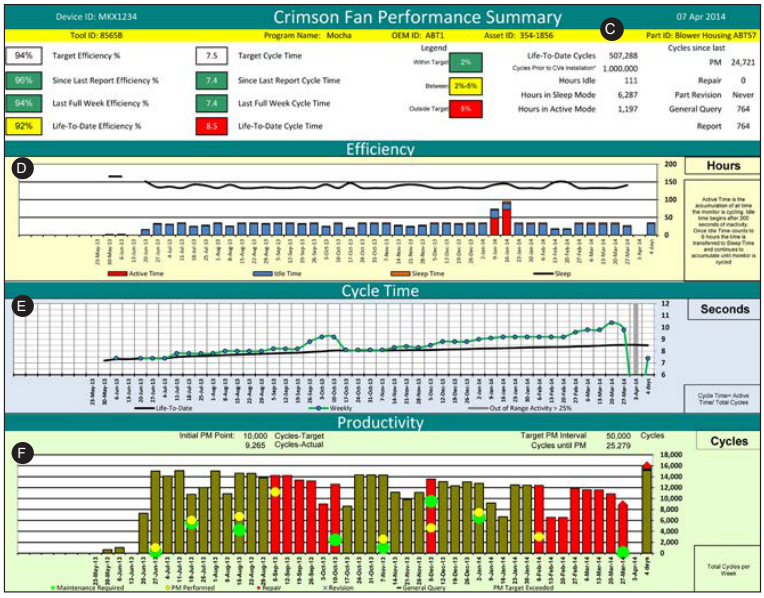
B: The target cycle times and efficiency percentages can be entered. OnDemand also supports ten languages: English, German, Mandarin, Spanish, French, Italian, Japanese, Korean, Portuguese and Thai. Reports, generated in the chosen language, compare actual values to targets, providing a quick view of 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.



CVe OnDemand is developed and supported by AST Technology, sister company of Progressive Components.

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.

In addition, the CVe Monitor records the temperature each week and these temperatures are shown in the OnDemand reports.

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CVe Monitor®

For real-time monitoring of tools, AST provides hardware and website 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.

CVe Live is developed and supported by AST Technology, sister company of Progressive Components.

Press Module

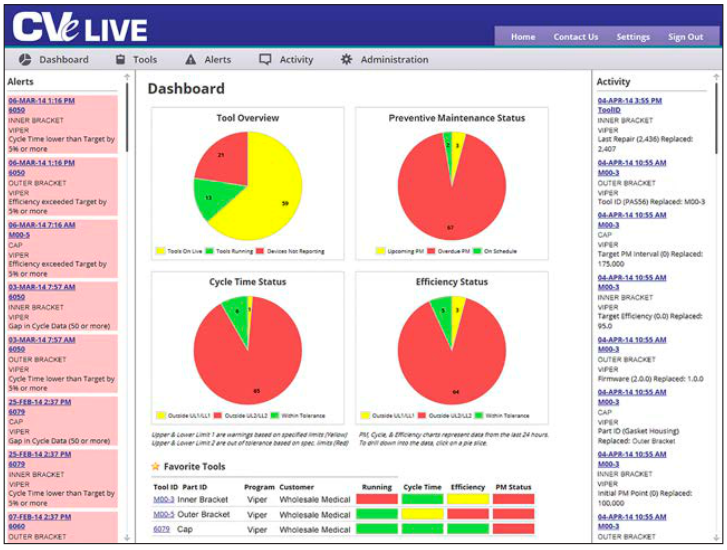
- 1 per press connects to the CVe Monitor via cables
- Power supply (US/International) included
- Sends data to the Gateway continuously
- Serves as a node on the network for tools running with a CVe Monitor
- Includes (1) CVEL-DATA9 Cable

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 via cellular technology
- Sends data to the customer's web portal 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.
- Dashboard gives users information at either the enterprise or plant level 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. This includes PM for molds and machines or other assets.
- Work Order function allows users to create work orders for molds, machines, or other assets.
- Asset Tracking shows where and when the CVe Monitor was last tethered to a CVe Live network.
- Plant exceptions screen shows any out-of-tolerance conditions.
- Downtime and reject tracking can be entered into the system and monitored through various reports.



- 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.

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