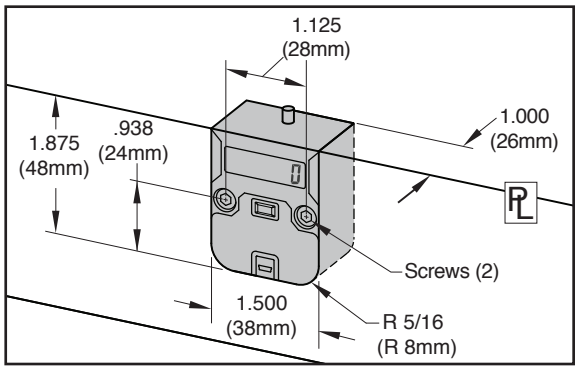
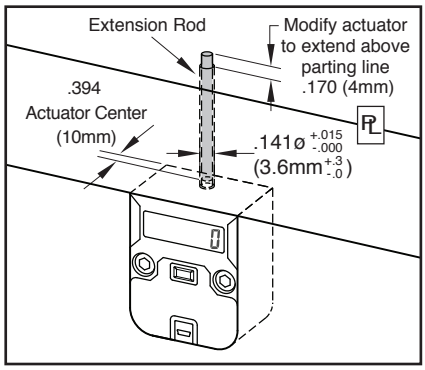
CVe MONITOR®

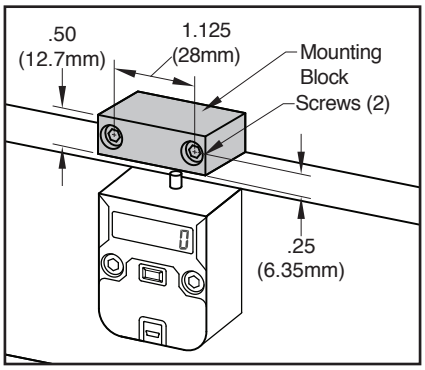
Progressive's CVe Monitor tracks tool activity, allowing users to view data on the display or from comprehensive reports using OnDemand or the new CVe Live System. Features include:

- 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 heat protection, refer to the Insulators available on pages F-10 and F-11.
- 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	CVe Monitor including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)

CATALOG NUMBER	DESCRIPTION
CVE-INT	Internal Extension Rod (8"/200mm)
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 and (1) CVE-INT.
- For installation outside of the mold (right graphic), order (1) CVE 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 page F-2.

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

PROGRESSIVE COMPONENTS

CVe MONITOR®

ON DEMAND ALERT MODES

Once data is initialized using the complimentary OnDemand software (from procomps.com/cve-ondemand) 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 both a wrench icon and PM Due as shown at right.

When a PM is performed and entered via OnDemand or by the in-mold actuation/button push combination, 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, and the replacement kit can be ordered separately below. 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

Using a USB cable, users can connect the CVe Monitor to their computer or tablet and view data in OnDemand, outlining the reason for the report generation. Notes can be included and user information is recorded for historical reference. More details about OnDemand are on the following pages.

OnDemand Activity Log [Software Version 3.1.0/2.6.1/3.1.9]

CVe Initialize Date	November 23, 2017	December 17, 2017
Device ID	MKX1234	MKX1234
Tool ID	8565B	8565B
	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 CVe Installation*	1000000	1000000
OEM ID	N/A	ABT1
ASSET ID	N/A	0356-5686

Reason for connecting CVe Monitor

Date/Time	Battery	Cycles	OD User	Conn. By	Company	Destination	REV	PM	REP	GEN	REV#	Notes
October 4, 2018	OK	507,288	INJECT11	Blake Fitz	Injection Tech	CrimsonQ@crmn.com	N	N	Y	N	N/A	Replaced damaged core pin in cavity 4
October 4, 2018	OK	506,524	INJECT11	Blake Fitz	Injection Tech	CrimsonQ@crmn.com	N	N	N	Y	N/A	Data Pull
September 19, 2018	OK	491,274	INJECT11	Blake Fitz	Injection Tech	CrimsonQ@crmn.com	N	N	Y	N	N/A	Pulled from production for mold operational issues. It is being sent for evaluation and rework
September 15, 2018	OK	482,567	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM: Cavity #2 was shutoff
June 28, 2018	OK	364,001	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM
May 31, 2018	OK	314,856	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM
April 28, 2018	OK	260,002	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM: Cavity #2 was shutoff
April 4, 2018	OK	211,563	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM
March 22, 2018	OK	193,268	INJECT11	Blake Fitz	Injection Tech	CrimsonQ@crmn.com	N	N	Y	N	N/A	3 cavities are shutdown. Pulled for evaluation and repair
February 7, 2018	OK	106,235	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM
January 10, 2018	OK	58,725	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Full PM
December 17, 2017	OK	9,265	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	Y	N	N	N/A	Initial mold inspection. There is no wear or damage to mold following initial run. Targets are set. Mold is released for production
November 23, 2017	OK	0	MOLDHOU1	Chuck Louse	Mold House	CrimsonQ@crmn.com	N	N	N	Y	N/A	Mold is completed and released for sampling

CATALOG NUMBER	DESCRIPTION
CVEL-DATA9	USB 2.0 to Type B Mini 9 Foot Long, Right-Angle Cable
CVE-REPLKIT	Battery Replacement Kit for the CVe Monitor.

CVe ONDEMAND®

Drive comprehensive reporting using data from the CVe Monitor when running OnDemand software, available at no charge from procomps.com/cve-ondemand. 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.

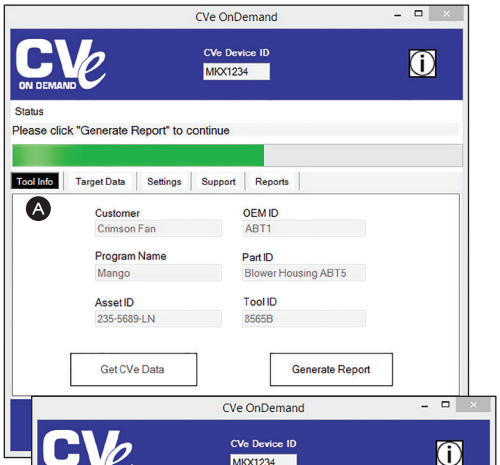
C: Statistics are provided to show quantity of total cycles and inactivity for the life of the tool.

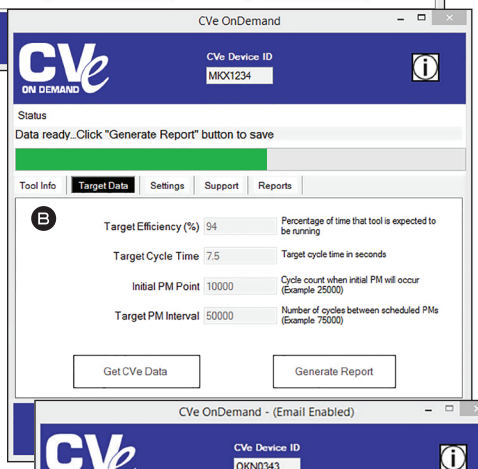
D: Weekly sessions are presented graphically to show production efficiency levels.

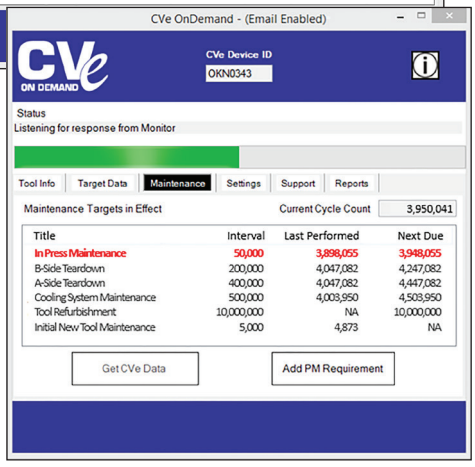
E: Weekly cycle time and maximum mold temperature tracking identifies tools with variances over the past year.

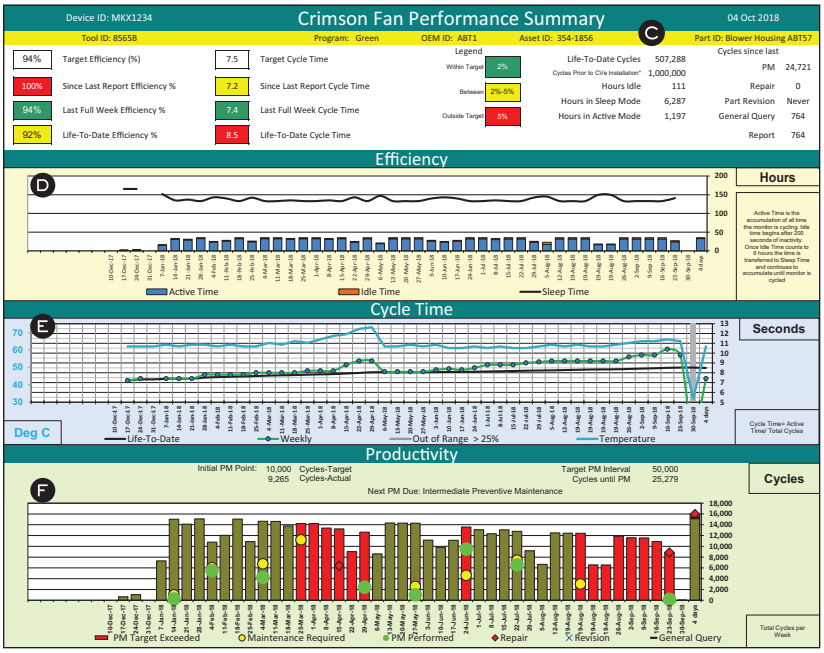
F: The productivity portion of the report takes the target preventive maintenance (PM) points set by the molder and compares them to actual maintenance pulls.

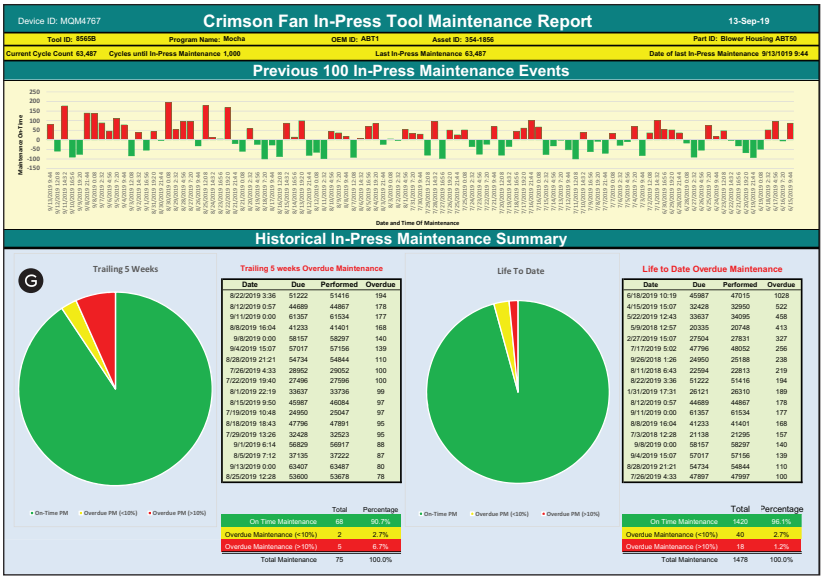
G: The Maintenance Tab has nine user-definable PM points. In addition, customers can perform maintenance without having their laptop or computer near the CVe Monitor. By holding down the button, cycling the monitor once, and releasing the button, an event will be recorded. This is then added to the OnDemand reports when run.











CVe LIVE®

For real-time monitoring of tools, Progressive 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.

HARDWARE

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

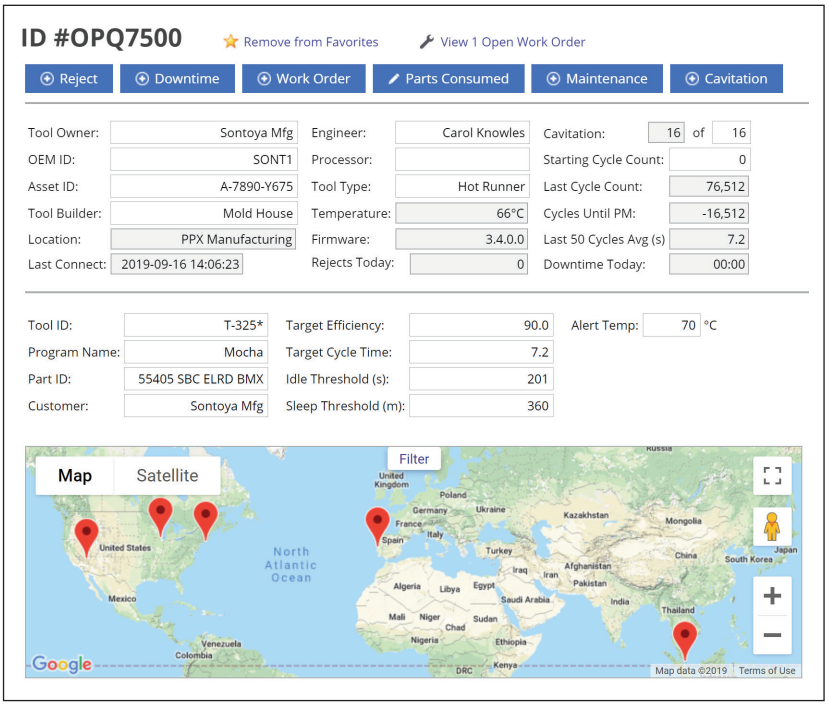
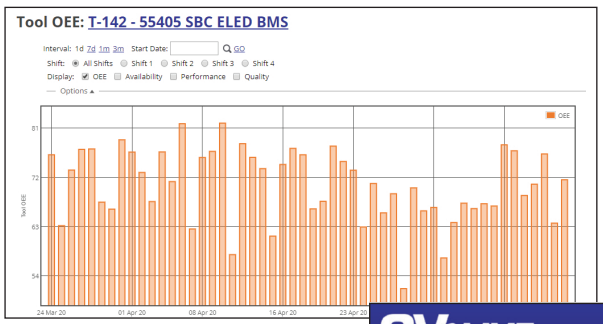
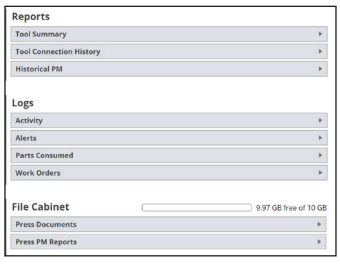
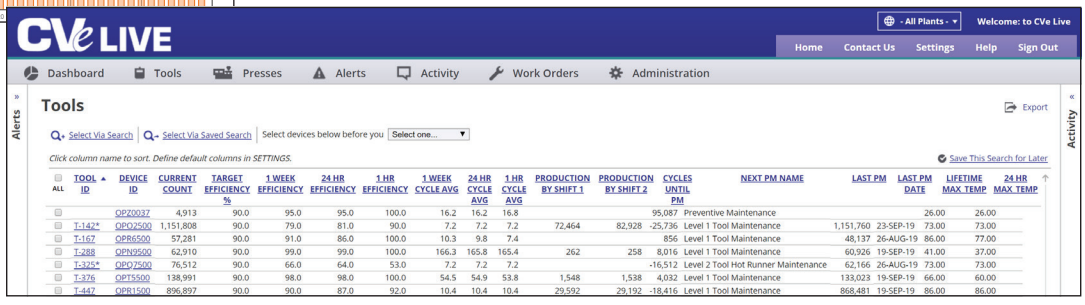
- 1 per facility collects data from all press modules installed via RF transmissions
- Accesses the internet via cellular technology
- Sends data to the customer's web portal every 15 minutes

REMOTE VALIDATION

Using the CVe Live website interface, the Remote Validation Kit eliminates the need to travel to mold trials and qualifications to gather information. Real-time data is available by connecting the portable system to the CVe Monitor on the mold.

- Can be easily moved between sites as qualifications dictate.
- Reduces or eliminates travel to mold qualifications.
- Users can upload and share files or documents including mold validation data, part drawings, process sheets, and quality inspection reports with global access.
- Monitor critical KPIs without being onsite.
- Generate real-time graphs and reports.
- Includes all hardware, antennas, and cables in a sturdy case. CVe Monitors and Tablets are sold separately.

Contact Customer Service for a CVe Live or Remote Validation Kit quotation.

CVe Live Website Features:

- Secure access for OEMs and molders.
- The Tool Dashboard gives users information at either the enterprise or plant level and allows for drill down into specifics on each tool.
- A Press Dashboard provides an overview of the status of every press and the tools that are running within them.
- Users can mark favorites and also save searches for monitoring specific programs or suppliers.
- Graphs include cycle times, efficiencies, cavitation, production loss, and preventive maintenance.
- Plant exceptions screen shows any out-of-tolerance conditions.
- PM Function allows for user-defined PM intervals. Users can create or customize PM forms and checklists for a specific maintenance program.
- Work Order function allows users to create work orders for molds, machines, or other assets.
- OEE is calculated for the both the press and the tool. This allows tooling and manufacturing operations to have separate OEE calculations to distinguish between equipment and tooling issues.
- GPS tracking allows for users to view the location of all tools by scanning a QR code using a GPS-enabled device. This feature is ideal for managers that are tracking multiple facilities or global operations. (Asset Tags sold separately on page F-7.)
- Administration and security levels are controlled by the user, and access can be customized for various roles.
- 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 access.
- Automated Data Exporter allows users to schedule data exports. Data will automatically download to a specified location, in Excel or JSON format, where it can then be imported to other in use systems.
- User-defined fields make customizing data simple for Tools, Presses, and Assets.