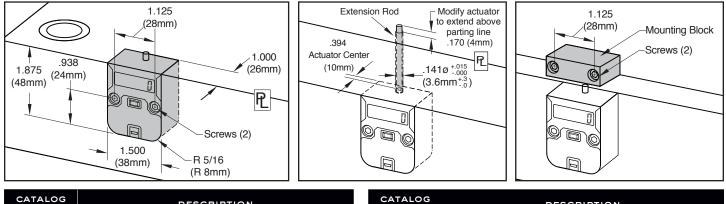
CVe MONITOR[®]

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.

CVE-EXT How to Order:

NUMBER

CVE-INT

- 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.

DESCRIPTION

Internal Extension Rod (8"/200mm) including

a hex key for CVe Monitor set screw removal. External Mounting Block including

#8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)

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.

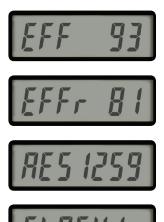
Efficiency Percentage-Recent

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.

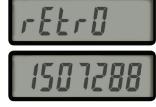
CABLES AND CONNECTIVITY

	OnDemand Activity Log [Software Version 2.0/2.0.1/2.2]										
				,	0 1						
CVe Initialize Date Device ID Tool ID	May 27, 2013 MKX1234 8565B Blower Housing	June 20, 2013 MKX1234 8565B Blower Housing									
Part ID Program Name	ABT57 Mocha	ABT57 Mocha									
Customer Target Efficiency %	Crimson Fan N/A	Crimson Fan 94%									
Target Cycle Time Initial PM Point	N/A 50000	7.5									
Target PM Interval ycles Prior to CVe Installation*	100000 0	100000									
OEM ID Asset ID	N/A N/A	ABT1 0356-5686									
							Reason fo	vr con	nectin	a CVa	Monitor
							neosonne	/ con	needing	ž	
Date/Time	Battery	Cycles	OD User	Conn. By	Company	Destination	P.M	REP	REV#	CVe	Notes
April 7, 2014	ОК	507,288	INJECTI1	Blake Fitz	Injection Tech	CrimsonQ@crmn.com	N N	Y N	N/A	0	Replaced damaged core pin in cavity 4
April 7, 2014 April 7, 2014	ОК ОК	507,288 506,524	INJECTI1 INJECTI1	Blake Fitz Blake Fitz	Injection Tech Injection Tech	CrimsonQ@crmn.com CrimsonQ@crmn.com		Y N N Y	N/A	0 0	Replaced damaged core pin in cavity 4 Data Pull Pulled from production for mold operational issues. It is being sen
April 7, 2014	ОК	507,288 506,524 491,274	INJECTI1	Blake Fitz	Injection Tech	CrimsonQ@crmn.com		Y N	N/A N/A N/A	0	Replaced damaged core pin in cavity 4
April 7, 2014 April 7, 2014 March 23, 2014	ок ок ок	507,288 506,524 491,274 482,567 364,001	INJECTI1 INJECTI1 INJECTI1	Blake Fitz Blake Fitz Blake Fitz	Injection Tech Injection Tech Injection Tech	CrimsonQ@crmn.com CrimsonQ@crmn.com CrimsonQ@crmn.com		Y N N Y Y N	I N/A N/A N/A N/A N/A	0 0 0	Replaced damaged core pin in cavity 4 Data Pull Pulled from production for mold operational issues. It is being sen evaluation and rework
April 7, 2014 April 7, 2014 March 23, 2014 March 19, 2014 December 30, 2013 December 2, 2013 October 30, 2013	ОК ОК ОК ОК ОК	507,288 506,524 491,274 482,567 364,001 314,856 260,002	INJECTI1 INJECTI1 INJECTI1 MOLDHOU1 MOLDHOU1 MOLDHOU1 MOLDHOU1	Blake Fitz Blake Fitz Blake Fitz Chuck Louse Chuck Louse Chuck Louse Chuck Louse	Injection Tech Injection Tech Injection Tech Mold House Mold House Mold House	CrimsonQ&crim.com CrimsonQ&crim.com CrimsonQ&crim.com CrimsonQ&crim.com CrimsonQ&crim.com CrimsonQ&crim.com		Y N Y N N N N N N N N N	I N/A N/A N/A N/A N/A N/A N/A	0 0 0 1 0 0	Replaced damagnd core pin in cavity 4 Data Juli Pulled from production for mold operational issues. It is being sen evaluation and revork Full PM Full PM Cavity K2 was shutoff Full PM Cavity K2 was shutoff
April 7, 2014 April 7, 2014 March 23, 2014 March 19, 2014 December 30, 2013 December 2, 2013	ОК ОК ОК ОК ОК	507,288 506,524 491,274 482,567 364,001 314,856 260,002 211,563	INJECTI1 INJECTI1 INJECTI1 MOLDHOU1 MOLDHOU1 MOLDHOU1	Blake Fitz Blake Fitz Blake Fitz Chuck Louse Chuck Louse Chuck Louse	Injection Tech Injection Tech Injection Tech Mold House Mold House Mold House	CrimsonQ@crmn.com CrimsonQ@crmn.com CrimsonQ@crmn.com CrimsonQ@crmn.com CrimsonQ@crmn.com CrimsonQ@crmn.com	N N N N N Y N Y N Y N Y	Y N Y N Y N N N N N	I N/A N/A N/A N/A N/A N/A N/A	0 0 0 1 0	Replaced damaged core pin in cavity 4 Data Pull Pulle from production for mold operational issues. It is being sen evaluation and rework Full PM: Cavity 42 was shutoff Full PM. Full PM.
April 7, 2014 April 7, 2014 March 23, 2014 March 19, 2014 December 30, 2013 December 2, 2013 October 30, 2013 October 6, 2013	ОК ОК ОК ОК ОК ОК	507,288 506,524 491,274 482,567 364,001 314,856 260,002 211,563 193,268	INJECTI1 INJECTI1 INJECTI1 MOLDHOU1 MOLDHOU1 MOLDHOU1 MOLDHOU1 MOLDHOU1	Blake Fitz Blake Fitz Blake Fitz Chuck Louse Chuck Louse Chuck Louse Chuck Louse Chuck Louse	Injection Tech Injection Tech Injection Tech Mold House Mold House Mold House Mold House Mold House	CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com	N N N N N Y N Y N Y N Y N Y N N	Y N Y N N N N N N N N N N N	I N/A N/A N/A N/A N/A N/A N/A N/A	0 0 0 1 0 0 0	Replaced damaged core prin in carkity 4 Data Mul Pulled from production for motion diperational issues. It is being sen evaluation and reverve Full PMC Carkity 42 was shutoff Full PM Full PM Full PM Full PM
April 7, 2014 April 7, 2014 March 23, 2014 March 19, 2014 December 30, 2013 December 2, 2013 October 30, 2013 September 23, 2013	ОК ОК ОК ОК ОК ОК	507,288 506,524 491,274 482,567 364,001 314,856 260,002 211,563 193,268 106,235	INJECTI1 INJECTI1 INJECTI1 MOLDHOU1 MOLDHOU1 MOLDHOU1 MOLDHOU1 INJECTI1	Blake Fitz Blake Fitz Blake Fitz Chuck Louse Chuck Louse Chuck Louse Chuck Louse Chuck Louse Blake Fitz	Injection Tech Injection Tech Injection Tech Mold House Mold House Mold House Mold House Injection Tech	CrimsanQBcrmn.com CrimsanQBcrmn.com CrimsanQBcrmn.com CrimsanQBcrmn.com CrimsanQBcrmn.com CrimsanQBcrmn.com CrimsanQBcrmn.com	N N N N N Y N Y N Y N Y N Y	Y N Y N N N N N N N N N N N N N N N N N	I N/A N/A N/A N/A N/A N/A N/A N/A N/A	0 0 0 1 0 0 0 0 0	Replaced damaged core pin in cavity 4 Data NI Nielle from production for mall operational issues. It is being sen evaluation and reveal Nal PAC core in the state of the state of the state Nal PAC core is the shadown Takit PAC core is a shadoff Takit PAC is a core is a shadoff Takit PAC is a shadown. Fulled for evaluation and repair
April 7, 2014 April 7, 2014 March 13, 2014 March 19, 2014 December 30, 2013 December 30, 2013 October 30, 2013 October 50, 2013 September 23, 2013 August 11, 2013	0K 0K 0K 0K 0K 0K 0K 0K 0K	507,288 506,524 491,274 482,567 364,001 314,856 260,002 211,563 193,268 106,235 58,725	INJECTI1 INJECTI1 INJECTI1 MOLDHOU1 MOLDHOU1 MOLDHOU1 MOLDHOU1 INJECTI1 MOLDHOU1	Blake Fitz Blake Fitz Blake Fitz Chuck Louse Chuck Louse Chuck Louse Chuck Louse Chuck Louse Blake Fitz Chuck Louse	Injection Tech Injection Tech Injection Tech Mold House Mold House Mold House Mold House Injection Tech Mold House	CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com CrimsonQBcrmn.com	N N N N N N N Y N Y N Y N Y N Y N Y N Y	Y N Y N N N N N N N N N N N N N N N N N	I N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0 0 0 1 0 0 0 0 0 0	Replaced damaged core pin in carly 4 Outs MI Alide from performance for meld operational source. It is being sen for the form of the source of the source of the source for the form of the source of the source of the source for the form of the source of the source of the source for the source of the source of the source of the source of the form of the source of the source of the source of the form of the source of the source of the source of the source of the form of the source of the form of the source of the sour

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. 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.

			Crimson Fan	Performance S	ummary 👝	
	Tool ID: 85658	1	rogram Name: Mocha	OEM ID: ABT1 Ass	iet ID: 354-1856	Part ID: Blower Housing ABT57
94%	Target Efficiency %	7.5 Target C	ycle Time	Legend Within Target 2%	Life-To-Date Cycles 507,28 Cycles Prior to CVe Installation* 1,000,00	
96%	Since Last Report Efficiency %	7.4 Since La	st Report Cycle Time	Between 2%-5%	Hours Idle 11	1 Repair O
94%	Last Full Week Efficiency %	7.4 Last Full	Week Cycle Time		Hours in Sleep Mode 6,28	
92%				Cutside Target 5%	Hours in Active Mode 1,19	
92%	Life-To-Date Efficiency %	8.5 Life-To-	Date Cycle Time		Report 764	
			Effic	iency		
D	_					200 Hours
	\sim	\sim		\sim	\sim	150
				-		100 Active Time is the accumulation of all time the monitor is cycling, Idle
	-000					50 time begins after 200 seconds of inactivity. Once idle Time counts to
	6 6 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1	Z-Mc13 1/Aug-13 6/Aug-13 2/Aug-13		7.169-13		Concerning the time is Source of the time is transferred to Steep Time and continues to accumulate until monitor is
	23-May-13 30-May-13 6-Aut-13 13-Aut-13 20-Aut-13 20-Aut-13 27-Aut-	Z-Mug-13 1-Mug-13 8-Mug-13 15-Mug-13 22-Mug-13	5-569-13 12-569-13 12-569-13 26-569-13 3-00-13 10-00-13 17-00-13 11-00-13	7.Mov.13 24.Mov.13 22.Mov.13 26.Mov.13 5.Otec.13 12.Otec.13 13.Otec.13 26.Otec.13 24.Mov.14 24.Mov.14 24.Mov.14 24.Mov.14 25.Mov.13 25.Otec.13 25.Mov.13 25.Otec.13 2	23-48-14 16-48-14 22-48-14 20-48-14 21-	accumulate until monitor is cycled
	Active Time		Idle Time	Sleep Time	Sleep	
G			Cycle	Time		
						12 11 Seconds
						10
			0000 000			9 8
						7
	23-Mby-13 29-Mby-13 20-Mby-13 23-Jun	25-14-13 1-4ug-13 8-4ug-13 15-4ug-13 23-4ug-13 23-4ug-13	5589-13 12-589-13 19-589-13 26-589-13 26-589-13 19-06-13 17-06-13 17-06-13 17-06-13 17-06-13	7-N004-13 14-N04-13 21-N04-13 226-N04-13 5-D84-13 12-D84-13 24-D84-13 25-D84-13 26-D84-14 27-D84-13 26-D84-14 27-D84	16 lanc 14 25 lanc 14 8 clarc 14 8 clarc 14 8 clarc 14 8 clarc 14 27 reb 14 27 reb 14 5 Marc 14 28 Marc 14 28 Marc 14 28 Marc 14 28 Marc 14 29 Marc 14 20	Cycle Time= Active
		14. 14. 14. 14. 14. 14. 14. 14. 14. 14.	8561 8561 9561 9562 9562 9562 9562 9562 9562 9562 9562		특류 중 중 등 중 등 및 및 및 및 ut of Ranze Activity > 25%	Cycle Time= Active Time/ Total Cycles
				ictivity	at of nunge recordy = 1570	
	Initia	I PM Point: 10,000 9,265			Target PM Interval 50,000 Cycles until PM 25,279	Cycles Cycles
G		9,205	Cycles-Actual		Cycles until PM 25,279	18,000
		0 00-		-		16,000
		┲┥╞┥╫╫				12,000
				📮 🗡		10,000
		8 H H 🖂 H		🕂		- 6,000 - 4,000
						2,000
	May-15 May-15 Hun-13 Hu	999999	9 9 9 9 9 9 9 9 9	2 2 2 2 2 2 2 2 2 2 2 2		Total Cycles per
		26-Jul-13 1-Aug-13 8-Aug-13 15-Aug-13 22-Aug-13 23-Aug-13	t12-88p-13 12-88p-13 12-88p-13 26-58	7-Nov-13 14-Nov-13 1	Norme Lizeeded	Week
	Maintenance Required OPM Per	lormed + K	epair X Revision	- General Query F	PM Target Exceeded #Monitor Re	moved

- **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.

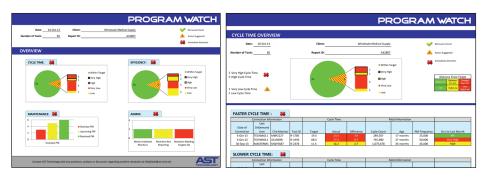
The New Maintenance Tab has 9 user-definable PM points (Incremental or Absolute). It provides an overview of when each type of PM was performed to a tool and when it is next due. It also allows the user to customize PM forms and checklists for their maintenance program.

CVe OnDemand - 🗆 🗵	CVe OnDemand -	CVe OnDemand – 🗆 🗡	CVe OnDemand - (Email Enabled) - 🗆 🗙
CV/c Device ID	CVe Device ID MIC(124	CYc Device ID M0/1224 Battery Low	Cive Device ID ORVID343
Status	Status	Status	Status
Please click "Generate Report" to continue	Data readyClick "Generate Report" button to save	Please click "Generate Report" to continue	Listening for response from Monitor
Tool Info Target Data Settings Support Reports	Tool Info Target Data Settings Support Reports	Tool Info Target Data Settings Support Reports	Tool Info Target Data Maintenance Settings Support Reports
Customer OEMID Crimson Fan ABT1	Target Efficiency (%) 94 Percentage of time that tool is expected to be running	Select a Language	Maintenance Targets in Effect Current Cycle Count 3,950,041
			Title Interval Last Performed Next Due In Press Maintenance 50,000 3,898,055 3,948,055
Program Name Part ID Mango Blower Housing ABT5	regeroyee time its	Storage Path for Reports Filetype: 2 xts/pdf 2 Encrypted Root File	B-Side Teardown 200,000 4,047,082 4,247,082
	Initial PM Point 10000 (Example 2500)	C:\Users\01TK2011\Documents\0DPC Reports\CVe\0nDemandReports	A-Side Teandown 400,000 4,047,082 4,447,082 Cooling System Maintenance 500,000 4,003,950 4,503,950
AssetID Tool ID	Target PM Interval 50000 Number of cycles between scheduled PMs (Example 75000)	Currently set to:	Tool Refurbishment 10,000,000 NA 10,000,000
235-5689-LN 8565B	(Lange 7500)	Browse	Initial New Tool Maintenance 5,000 4,873 NA
		Network Storage is recommended	
Get CVe Data Generate Report	Get CVe Data Generate Report	Save	Get CVe Data Add PM Requirement
AST	AST	AST	AST
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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 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.



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



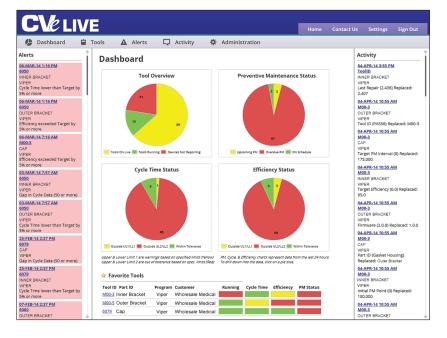


Gateway

- 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.

