



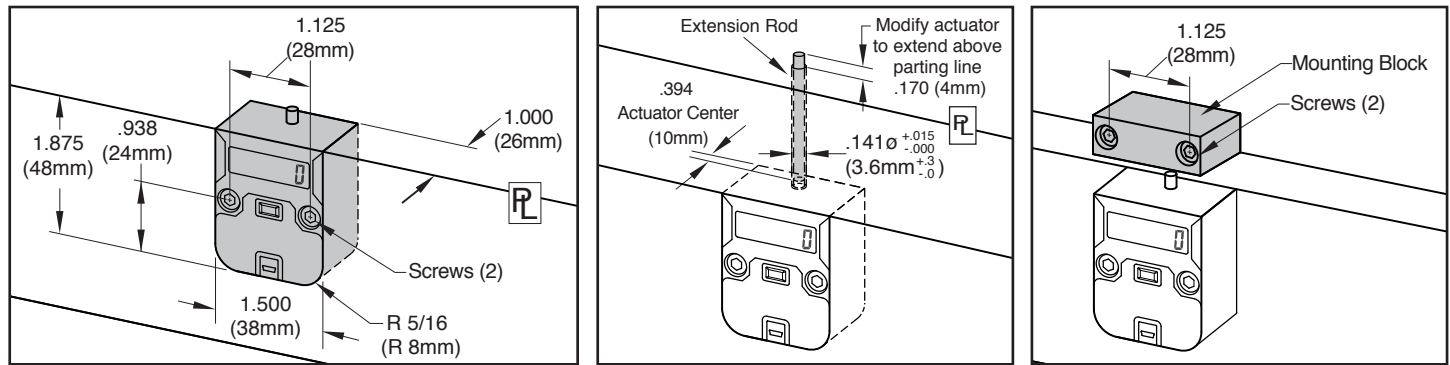
# CVE MONITOR®

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 tech@procomps.com.
- 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
<b>CVE-M</b>	CVe Monitor v3 Mold Maker/Molder version including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)
<b>CVE-O</b>	CVe Monitor v3 OEM version including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2)

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

OEM-specific CVE Monitors are available. Contact Progressive for more information.

### 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.



### Efficiency Percentage

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



### Cycle Time

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



### Efficiency Percentage-Recent

The percentage of time the mold has been active in the past 500 cycles.



### Cycle Time-Recent

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



### Cycle Count Reset

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



### Mold Temperature

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



### 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.



# 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 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. 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

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	MIKX1234	MIKX1234												
Tool ID	85658	85658												
Blower Housing	Blower Housing	Blower Housing												
Part ID	ABT57	ABT57												
Program Name	Mictha	Mictha												
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												
ODM 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	EV	W	PM	RE	RP	IN	VE	Notes
October 4, 2018	OK	507,288	INJECT11	Blake Fitz	Injection Tech	Crimson@crvm.com	N	N	N	Y	N	N	N/A	Replaced damaged core pin in cavity 4
October 4, 2018	OK	506,524	INJECT11	Blake Fitz	Injection Tech	Crimson@crvm.com	N	N	N	Y	N	N	N/A	Data Full
September 19, 2018	OK	491,274	INJECT11	Blake Fitz	Injection Tech	Crimson@crvm.com	N	N	Y	N	N	N	N/A	Pulled from production for mold operational issues. It is being sent for evaluation and rework
September 15, 2018	OK	482,567	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM: Cavity #2 was shutdown	
June 28, 2018	OK	364,001	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM	
May 31, 2018	OK	314,856	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM	
April 28, 2018	OK	260,002	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM: Cavity #2 was shutdown	
April 4, 2018	OK	211,563	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM	
March 22, 2018	OK	193,368	INJECT11	Blake Fitz	Injection Tech	Crimson@crvm.com	N	N	Y	N	N	N/A	3 cavities are shutdown. Pulled for evaluation and repair	
February 7, 2018	OK	106,235	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM	
January 10, 2018	OK	58,725	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	N	N	N/A	Full PM	
December 17, 2017	OK	9,265	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	Y	N	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	MOLDH0U1	Chuck Louise	Mold House	Crimson@crvm.com	N	N	N	N	Y	N/A	Mold is completed and released for sampling	



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

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 ONDEMAND®

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 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.

**Tool Info**

Customer: Crimson Fan, OEM ID: ABT1, Program Name: Mango, Part ID: Blower Housing ABT5, Asset ID: 235-5689-LN, Tool ID: 8565B

**Target Data**

Target Efficiency (%): 94, Target Cycle Time: 7.5, Initial PM Point: 10000, Target PM Interval: 50000

**Maintenance**

Maintenance Targets in Effect: In-Press Maintenance (50,000), B-Side Teardown (200,000), A-Side Teardown (400,000), Cooling System Maintenance (500,000), Tool Refurbishment (10,000,000), Initial New Tool Maintenance (5,000)

**Crimson Fan Performance Summary**

Device ID: MKX1234, Program: Green, OEM ID: ABT1, Asset ID: 354-1856, Part ID: Blower Housing ABT57

94% Target Efficiency (%), 7.5 Target Cycle Time, 100% Since Last Report Efficiency %, 94% Last Full Week Efficiency %, 92% Life-To-Date Efficiency %

7.5 Target Cycle Time, 7.2 Since Last Report Cycle Time, 7.4 Last Full Week Cycle Time, 8.5 Life-To-Date Cycle Time

**Efficiency** (Hours): Active Time, Idle Time, Sleep Time

**Cycle Time** (Seconds): Cycle Times Active, Total Cycles

**Productivity** (Cycles): Initial PM Point: 10,000, Cycles-Target: 9,265, Cycles-Actual: 25,279, Target PM Interval: 50,000, Cycles until PM: 25,279

**Crimson Fan In-Press Tool Maintenance Report**

Device ID: MQM4767, Program Name: Mocha, OEM ID: ABT1, Asset ID: 354-1856, Part ID: Blower Housing ABT59

Current Cycle Count: 63,467, Cycles until In-Press Maintenance: 1,000, Last In-Press Maintenance: 63,467, Date of last In-Press Maintenance: 9/13/2019 9:44

**Previous 100 In-Press Maintenance Events**

**Historical In-Press Maintenance Summary**

Trailing 5 Weeks: On Time Maintenance (68, 90.7%), Overdue Maintenance (<10%) (2, 2.7%), Overdue Maintenance (10-20%) (3, 3.7%), Total Maintenance: 73, 100.0%

Life To Date: On Time Maintenance (1420, 96.1%), Overdue Maintenance (<10%) (40, 2.7%), Overdue Maintenance (10-20%) (10, 0.7%), Total Maintenance: 1470, 100.0%

# 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.

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.
- 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 manufacturing operations. The dashboard displays 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 for cycle times, efficiencies, cavitation, and production loss, and also preventive maintenance, can be shown and saved.
- Plant exceptions screen shows any out-of-tolerance conditions.

The screenshot shows the CVe LIVE web interface. At the top, there's a navigation bar with 'Home', 'Contact Us', 'Settings', 'Help', and 'Sign Out'. Below that is a main menu with 'Dashboard', 'Tools', 'Presses', 'Alerts', 'Activity', 'Work Orders', and 'Administration'. The 'Dashboard - Presses' section is active, displaying four pie charts: 'Press Overview', 'Preventive Maintenance Status', 'Cycle Time Status', and 'Efficiency Status'. Each chart has a legend with categories like 'Idle / Down', 'Active', 'No Mold', 'Upcoming PM', 'Overdue PM', 'On Schedule', 'Outside UL1/LL1', 'Outside UL2/LL2', and 'Within Tolerance'. Below the charts is a 'Favorite Presses' table with columns for Press Name, Tool ID, Part ID, Running, Cycle Time, Efficiency, and PM Status. The table lists two presses: Pr No 1 (T-142\*) and Pr No 2 (T-288). On the left, there's an 'Alerts' sidebar with a list of recent events, and on the right, an 'Activity' sidebar with a list of recent actions.





- 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.
- Work Order function allows users to create work orders for molds, machines, or other assets.
- GPS tracking allows for users to view the location of all tools by scanning a QR code using a compatible GPS-enabled phone. This feature is ideal for managers that are tracking multiple facilities or global operations. (Asset Tags sold separately.)
- 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.
- An automated Data Exporter allows users to schedule data exports from many pages within CVe Live. Data will automatically download to a specified location, in Excel or json format, where it can then be imported to other in use systems.
- OEE is calculated independently 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.

**ID #OPQ7500** ★ Remove from Favorites    🔍 View 1 Open Work Order

⊕ Reject
⊕ Downtime
⊕ Work Order
✍ Parts Consumed
⊕ Maintenance
⊕ Cavitation

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Tool Owner:  Engineer:  Cavitation:  of

OEM ID:  Processor:  Starting Cycle Count:

Asset ID:  Tool Type:  Last Cycle Count:

Tool Builder:  Temperature:  Cycles Until PM:

Location:  Firmware:  Last 50 Cycles Avg (s):

Last Connect:  Rejects Today:  Downtime Today:

---

Tool ID:  Target Efficiency:  Alert Temp:  °C

Program Name:  Target Cycle Time:

Part ID:  Idle Threshold (s):

Customer:  Sleep Threshold (m):

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**Reports**

- Tool Summary
- Tool Connection History
- Historical PM

**Logs**

- Activity
- Alerts
- Parts Consumed
- Work Orders

**File Cabinet** 9.97 GB free of 10 GB

- Press Documents
- Press PM Reports

	L1 (Warning) Value	L1 (Warning) %	L2 (Out of Tolerance) Value	L2 (Out of Tolerance) %
Cycle Time Upper:	7.3	2.0	7.6	5.0
Cycle Time Lower:	7.1	2.0	6.8	5.0
Efficiency Upper:		5.0		10.0
Efficiency Lower:		5.0		10.0

L1 - Warning limits (Yellow)  
L2 - Out of Tolerance limits (Red)

Note: If you only want a single set of limits, only populate L2

**From LIVE**

Next PM Due:

Last PM:   [Add PM](#)

Last Repair:  [Add Repair](#)

Last Revision:  [Add Revision](#)

[Configure PM Points](#)

**Map** Satellite Filter

Map data ©2019 Terms of Use

**CVe LIVE** Welcome to CVe Live

Home Contact Us Settings Help Sign Out

Dashboard
Tools
Presses
Alerts
Activity
Work Orders
Administration

---

**Alerts** Export

**Presses**

Q Select Via Search | Select presses below before you Select one...

Click column name to sort.

ALL	PRESS NAME	PLANT	BRAND	TONNAGE	MAX SHOT	TARGET OEE	1 WEEK OEE	24 HR OEE	HOURS UNTIL PM	NEXT PM NAME	LAST PM DATE	PM STATUS	LAST CONNECT	RUNNING STATUS	LAST DEVICE ID	LAST TOOL ID
<input type="checkbox"/>	Pr No 1	PPX Manufacturing	Cincinnati	160	394.00	90.0	79.0	77.0	18.7	Standard Press Maintenance	26-AUG-19	UPCOMING	2019-08-26 12:16:23	ACTIVE	OPO2500	T-142*
<input type="checkbox"/>	Pr No 2	PPX Manufacturing	Krauss Maffei	1,300	136.00	90.0	91.0	87.0	79.4	Standard Press Maintenance	26-AUG-19		2019-08-26 12:10:08	ACTIVE	OPN9500	T-288
<input type="checkbox"/>	Pr No 3	PPX Manufacturing	Nissei	220	569.00	90.0	99.0	99.0	-13.1	Standard Press Maintenance	26-AUG-19	OVERDUE	2019-08-26 12:15:47	ACTIVE	OPR1500	T-447
<input type="checkbox"/>	Pr No 4*	PPX Manufacturing	Milacron	220	70.00	90.0	66.0	64.0	220.8	Standard Press Maintenance	26-AUG-19		2019-08-26 12:13:48	ACTIVE	OPT5500	T-376
<input type="checkbox"/>	Press 01	Progressive Components Both Demo														

**CVe LIVE** Welcome to CVe Live

Home Contact Us Settings Help Sign Out

Dashboard
Tools
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Work Orders
Administration

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**Alerts** Export

**Tools**

Q Select Via Search | Q Select Via Saved Search | Select devices below before you Select one...

Click column name to sort. Define default columns in SETTINGS.

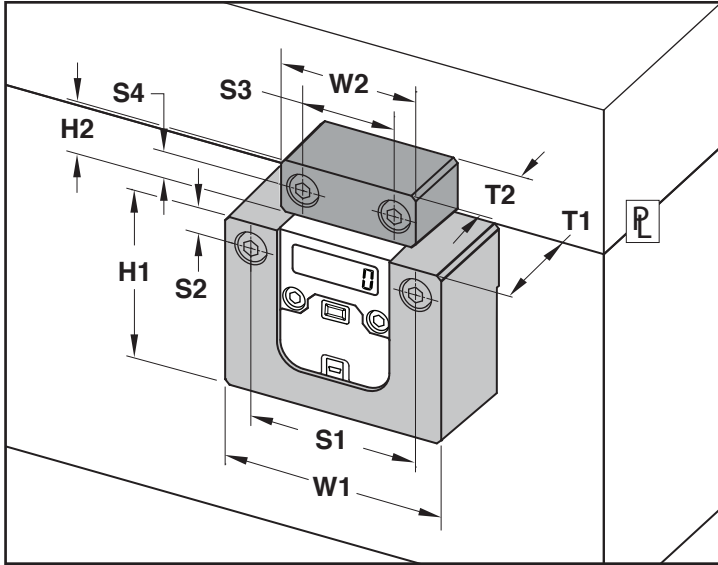
Save This Search for Later

ALL	TOOL ID	DEVICE ID	CURRENT COUNT	TARGET EFFICIENCY %	1 WEEK EFFICIENCY	24 HR EFFICIENCY	1 HR EFFICIENCY	1 WEEK CYCLE AVG	24 HR CYCLE AVG	1 HR CYCLE AVG	PRODUCTION BY SHIFT 1	PRODUCTION BY SHIFT 2	CYCLES UNTIL PM	NEXT PM NAME	LAST PM DATE	LAST PM DATE	LIFETIME MAX TEMP	24 HR MAX TEMP
<input type="checkbox"/>	OP20037		4,913	90.0	95.0	95.0	100.0	16.2	16.2	16.8			95,087	Preventive Maintenance			26.00	26.00
<input type="checkbox"/>	T-142*	OPO2500	1,151,808	90.0	79.0	81.0	90.0	7.2	7.2	7.2	72,464	82,928	-25,736	Level 1 Tool Maintenance	1,151,760	23-SEP-19	73.00	73.00
<input type="checkbox"/>	T-167	OPR6500	57,281	90.0	91.0	86.0	100.0	10.3	9.8	7.4			856	Level 1 Tool Maintenance	48,137	26-AUG-19	86.00	77.00
<input type="checkbox"/>	T-288	OPN9500	62,910	90.0	99.0	99.0	100.0	166.3	165.8	165.4	262	258	8,016	Level 1 Tool Maintenance	60,926	19-SEP-19	41.00	37.00
<input type="checkbox"/>	T-325*	OPO7500	76,512	90.0	66.0	64.0	53.0	7.2	7.2	7.2			-16,512	Level 2 Tool Hot Runner Maintenance	62,166	26-AUG-19	73.00	73.00
<input type="checkbox"/>	T-376	OPT5500	138,991	90.0	98.0	98.0	100.0	54.5	54.9	53.8	1,548	1,538	4,032	Level 1 Tool Maintenance	133,023	19-SEP-19	66.00	60.00
<input type="checkbox"/>	T-447	OPR1500	896,897	90.0	90.0	87.0	92.0	10.4	10.4	10.4	29,592	29,192	-18,416	Level 1 Tool Maintenance	868,481	19-SEP-19	86.00	86.00

# INSULATOR BLOCK ASSEMBLY

Progressive's Insulator Block protects the CounterView and CVe Monitor to enable molders to view cycle counts and additional information on higher temperature tools.

- Maximum temperature: 180°C/360°F



CATALOG NUMBER	DESCRIPTION	H1	W1	T1	S1	S2	H2	W2	T2	S3	S4
CV-BLK	Inch version with screws: (2) 1/4-20 x 1-1/8 (Actuator) (2) 1/4-20 x 1-1/2 (Block)	2.37	3.00	1.37	2.250	.500	.75	2.00	1.00	1.000	.375
CVMM-BLK	Metric version with screws: (2) M6-1.0 x 30 (Actuator) (2) M6-1.0 x 40 (Block)	58.5	78	35	58	13	20	47	25	23	10

### Application Guidelines:

- Installation can be on the cavity or core half of the tool. For use with CVe Live, mount to the stationary half for optimum cable routing.
- Position the Insulator Blocks at parting line and install screws as shown above.
- The Inch or Metric Insulator Block assembly accepts the screws from the square CounterView sold on page F-6 or the CVe Monitor sold on page F-1.

