Balance Viewer Installation and Startup

This document is for installation and startup of the optional *eDART™* tool "Balance Viewer". The file "The Value of the Balance Viewer.pdf" describes the purpose and rationale for the tool. The file "Balance Viewer Demonstration.avi" shows about 6 minutes of examples and directions for use.

Installation

Installation uses the normal procedures for installing eDART software.

1. Make a network connection to the eDART, either from a portable computer and crossover cable or through the plant network and eDART Data Manager (EDM)

2. Open the file containing the installer files using a .zip format extractor (such as Winzip) and save the files into a temporary place.

3. Open the folder where the temporary files are and run edart_installer.exe. This will bring up the window at the right.

4. Check the software version for the eDART(s) on which you will be installing. They should be at least at release 8.7a.

5. Select by clicking on the machine to which you wish to install. If you have a license to install on more than one machine use the CTL key while clicking to select multiple machines. Use the shift key while clicking to select a whole block.

   Note: If the network prevents the installer from finding the eDARTs you can enter their IP addresses in the field next to "Add", click "Add" for each and then select them as above. EDM users can place the files in a folder under the shared "\\edm\RJG Installs" and then install the software from the EDM console.
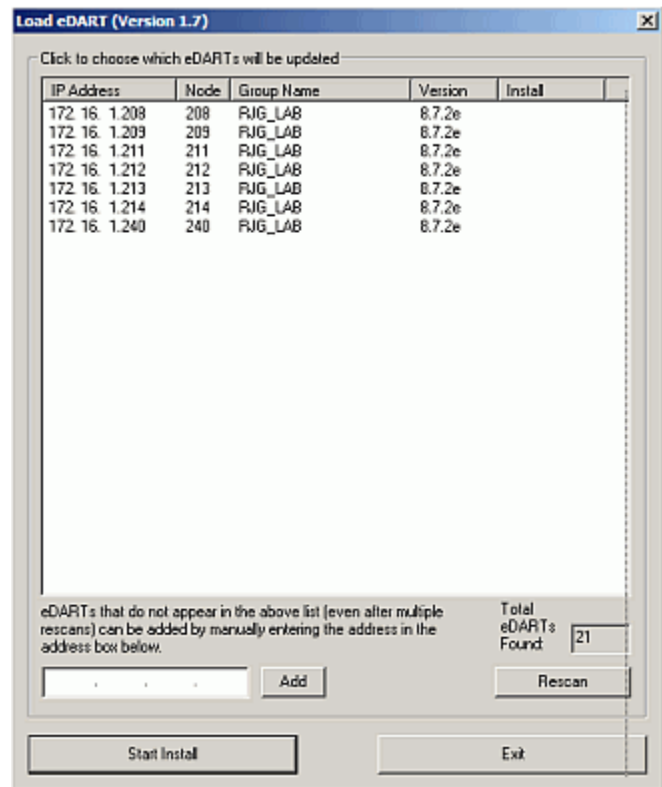
6. Click "Start Install" to start the install. The Balance Viewer install is automatic so you do not have to re-start the eDART or the job on a running eDART. You can move to the "Startup" step immediately once the installer reads "completed" next to each eDART.

Startup

The Balance Viewer makes sense, of course, only in systems with multiple in-cavity sensors. In the eDART's Sensor Locations screen you have an "Id" column for each sensor. The Balance Viewer sorts these cavities alphabetically or numerically across the bottom of the screen. Therefore, when choosing the names for cavities in Sensor Locations follow these rules:

- Choose a location that best represents where the sensor is in the cavity relative to the flow: Post Gate, Mid Cavity or End of Cavity. This is true of Mold Temperature sensors as well.

- The balance viewer sorts from left to right using alpha-numeric sorting. If you place letters before the number it will sort by the number at the end of the text.

- Long cavity identifiers will be hard to see because the Balance Viewer will reduce font size to fit them in. Use short identifiers, preferably without prefixes like "Cav".

Choose one of three options for starting the Balance Viewer tool:

1. For the current mold and every time that mold runs again ("Attached" to the mold).

2. Every time <u>any</u> mold runs.

3. Only when needed from the eDART's "Main Menu".

Start the "Architect" from the eDART's Main Menu.

1. For the Current Mold

   A. Select the "Applications" panel.

   B. Drag the "Balance Viewer" to the current mold's workspace.

   C. Close the Architect.
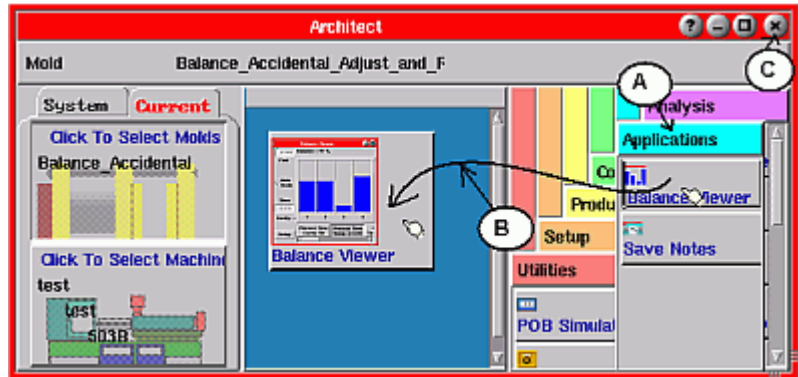
2. For Any Mold

   A. Select the "Applications" panel.

   B. Select the "System" tab

   C. Expand the folders with the [+] beside eDART

   D. Select the "Molds" folder

   E. Drag the "Balance Viewer" from the "Applications" tab to the workspace.
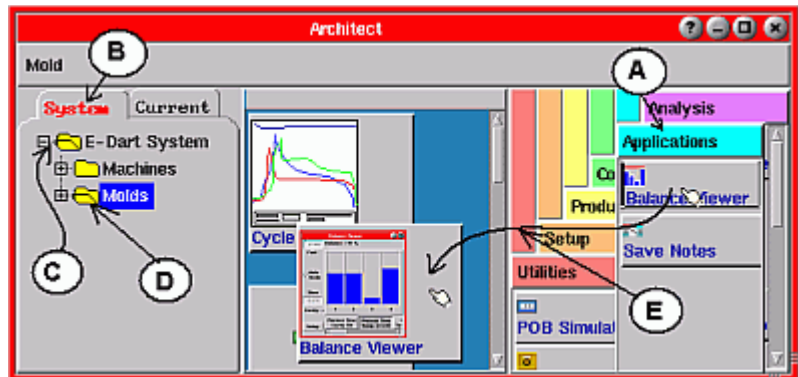
Stop the job and start it again.

3. Only When Needed on the Main Menu

   A. Select the "Applications" panel.

   B. Select the "System" tab.

   C. Drag the Balance Viewer into the workspace.

   D. Close the Architect.
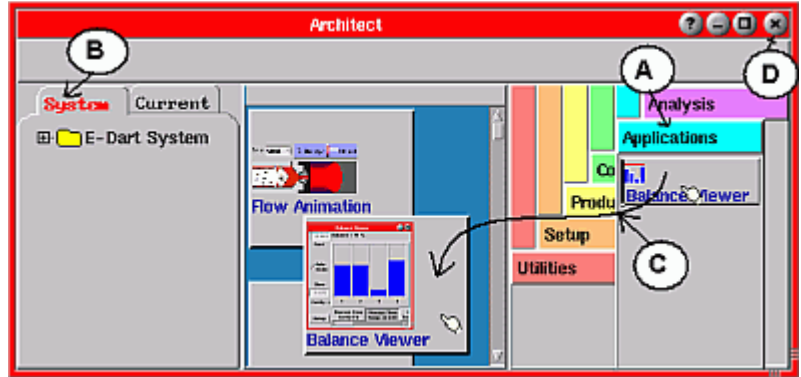
## Setting Proper Cavity Fill Pressure Threshold

For each new process setup the eDART defaults to calculating cavity fill time by measuring the time between the start of flow and the rise in End of Cavity pressure to 1000 psi (~ 69 bar). If your mold does not have end of cavity sensors or the mold is full at something other than 1000 psi then you will need to set up the way it detects a full cavity in order to see cavity fill time balance.

1. First, look at the cycle graph and find the kink or sudden rise in pressure. For mid cavity or post gate sensors this can be quite some time into the pressure rise.

2. Place the cursor at the kink in the curve and note the pressure there.
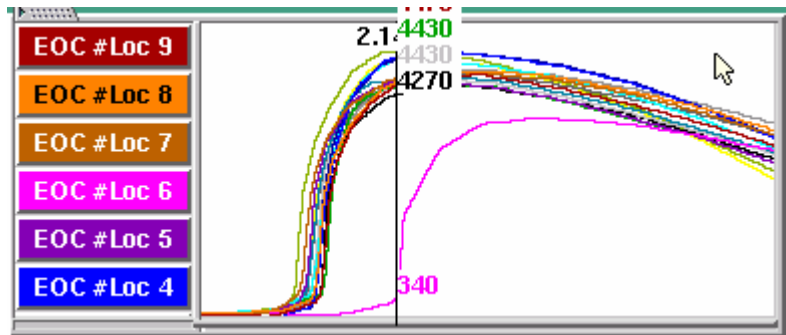
   Pick the highest value for the several curves. In this example we measure 340 psi.

3. Open the Sequence Settings' "Cavity Fill" tab.
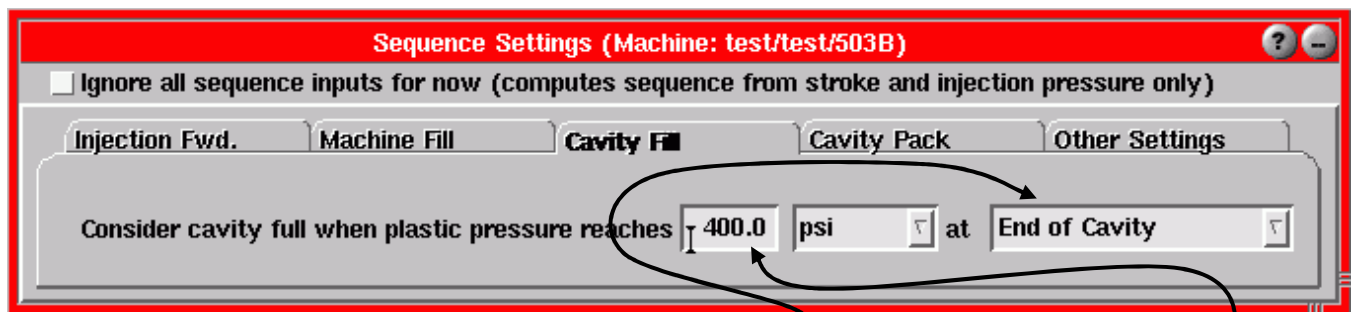
4. Select the sensor location that will be used to compute fill.

5. Enter a threshold some about 20% above what you measured with the cycle graph cursor.

Checkout

The following diagram should appear. The callouts describe what you should see. This is a cavity pressure application.

After the first 2 shots there should be a button on the selector bar for each common summary variable. In future releases the "Setup" button may allow buttons to be added or hidden.

A blue bar should be available for every valid cavity value. If a bar is not visible try switching off the auto-scale and manually setting the scaling levels wide enough to see the values.

If you set a wide range and still cannot see a value then the eDART probably is unable to compute it. For example, if you set (or leave) the fill threshold at 1000 psi and the pressure never reaches 1000 psi then the eDART cannot compute the cavity fill time and will leave the bar blank.
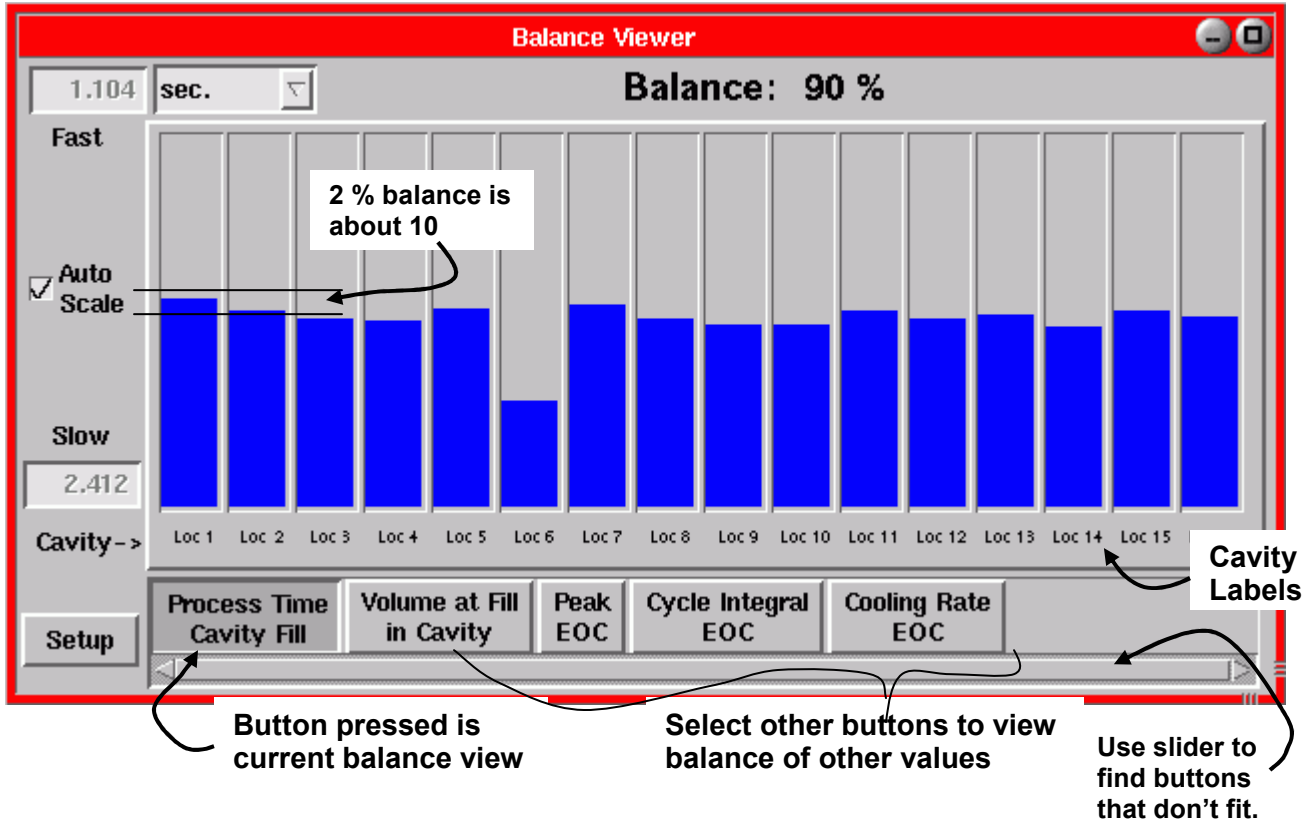
Here is an example of balance viewing in a temperature only application. Notice that the summary values are different and appropriate to temperature. "Minimum" is the mold surface temperature.