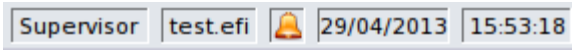
VISIONS 3000 GRAPHS

LINUX 2.52

Graphs & Visulations

You can configure VISIONS 3000 Graphs from the **setup dialog**.

To edit Water Zones, you must first be logged in as the supervisor



Accessing the Graph Pages

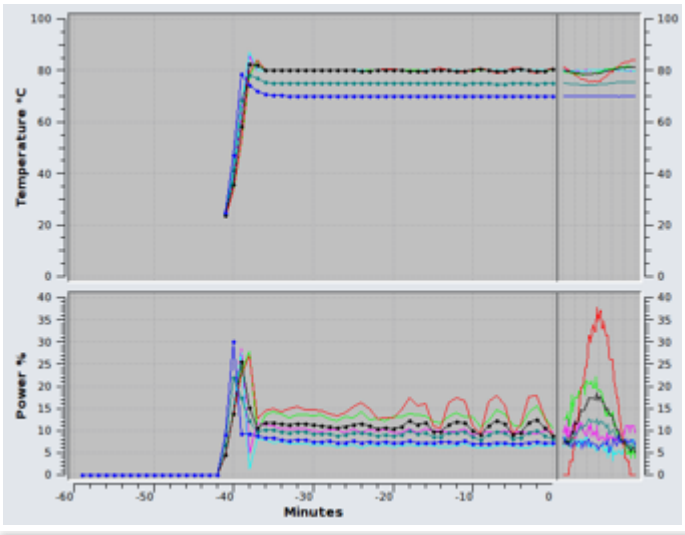
From the home screen or the main run-screen, in monitor-mode or run-mode, press the setup button, then select the "View Graphs" icon.

This takes you to the Graph page.

From here you can:

- View up to eight zones in live view and view the last hour's logged data minute by minute.
- View cavity, manifold and global average traces.
- Edit the y-axis scales.
- View up to eight zones from the controller's year-long data history.
- Switch to surface map view.
- Switch to the water-zone graphs (if fitted).

Live Graph



The live graph shows the last minute's data (temperature and power) for up to eight user-selected zones, updated every second. Additionally, it shows the last hour's data updated once a minute.

The upper graph shows the traces for temperature.
The lower graph shows the power traces.

The axes of the graph are labelled and below the graph is a legend which displays each zone number and name (if configured) in the trace color.

VISIONS 3000 GRAPHS

LINUX 2.52

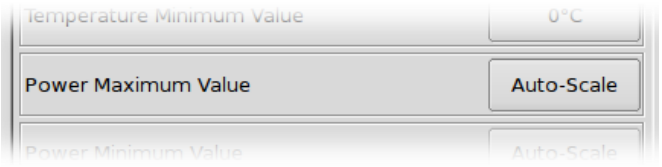
The live graph is useful for identifying poorly performing zones (as for the red trace in the example above) and to review the effect of zone tuning efforts.

Edit Traces

You can add and remove up to 8 zones and 3 averages by pressing this button.
For the hour-long portion of the graph, the average traces are rendered with small circles at each data-point.
These changes also affect the history graphs.

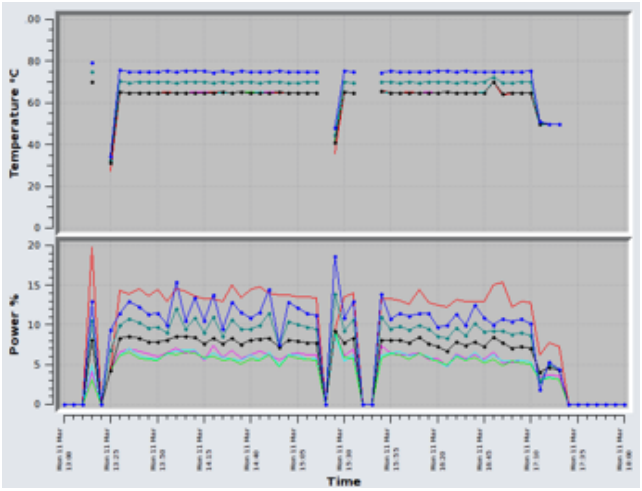
Edit Scales

Change the y-axes upper and lower values by selecting this option.
This allows you to zoom in on areas of interest in the graph. If you select to change the maximum value for temperature or power, you have the option of auto-scaling the y-axis; enter zero to select auto-scaling. This feature selects appropriate y-axis values based on the live-view portion of the graph. The graph will constantly rescale in order to keep the traces visible.



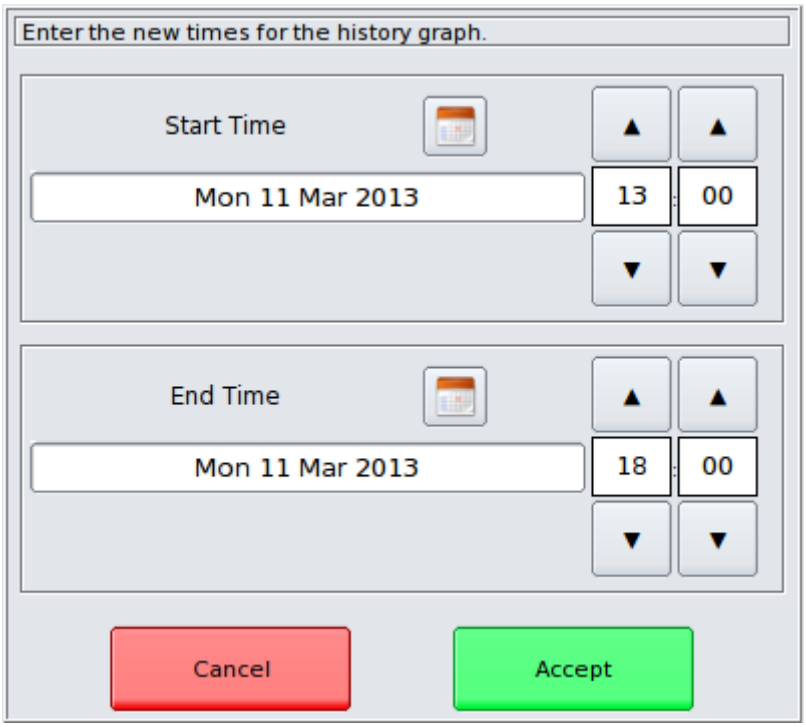
These changes also affect the history graphs.

View History



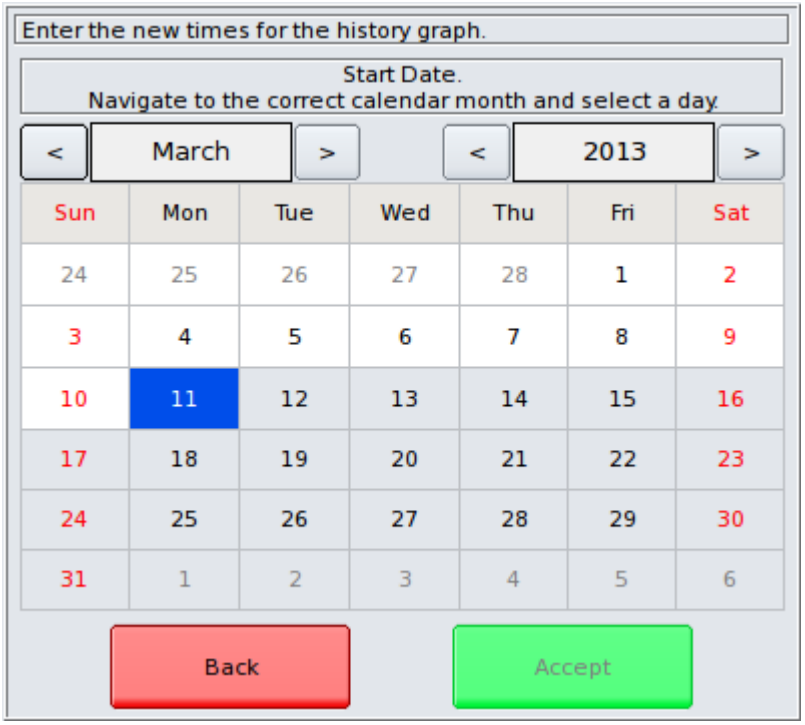
Press this button to switch to the history graphs. he VISIONS 3000 controller stores zone data for one year. The data stored is the minute-average data for each zone.

The same zones and scale settings as the live graph views are used.



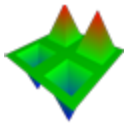
You can edit the x-axis scale by pressing the **Time-line** button; change the start and end times and the start and end dates using the time-calendar dialog:

Click the calendar icon to change the start or end dates:



VISIONS 3000 GRAPHS

LINUX 2.52



Surface Map

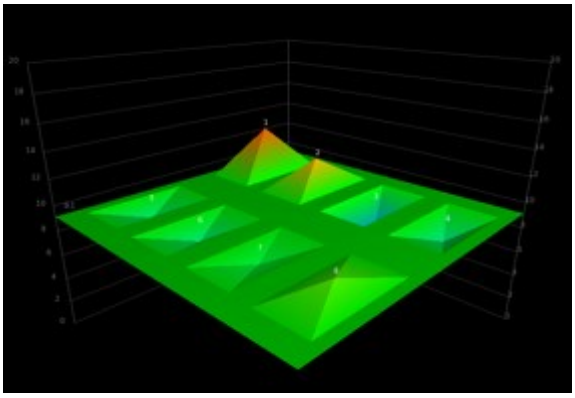
This visualization tool allows you to view the cavity zones as a 3-dimensional surface. It is useful for quickly comparing the performance of all of the cavities in one graph. All the cavities are visible as pyramids set against a baseline level which is the average.

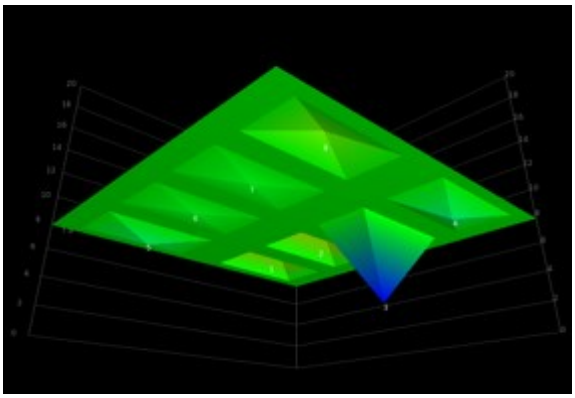
You can view average or instantaneous data, updated live every second and you can rotate and zoom the view so that relevant zones are visible.

The data which can be visualized live are:

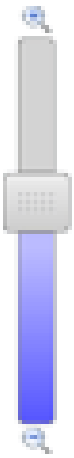
- Power as a percentage of full power per zone,
- Power in Watts,
- Temperature.

The images below show an 8 cavity tool which has stabilized at setpoint. The data being graphed is the % - power average. You can see from the first image that 2 zones require more power than the others while the second image, which has been rotated, reveals that one zone requires considerably less.





Rotate the view by touching the graph and swiping your *finger.*



Use the slider to zoom the view.

VISIONS 3000 GRAPHS

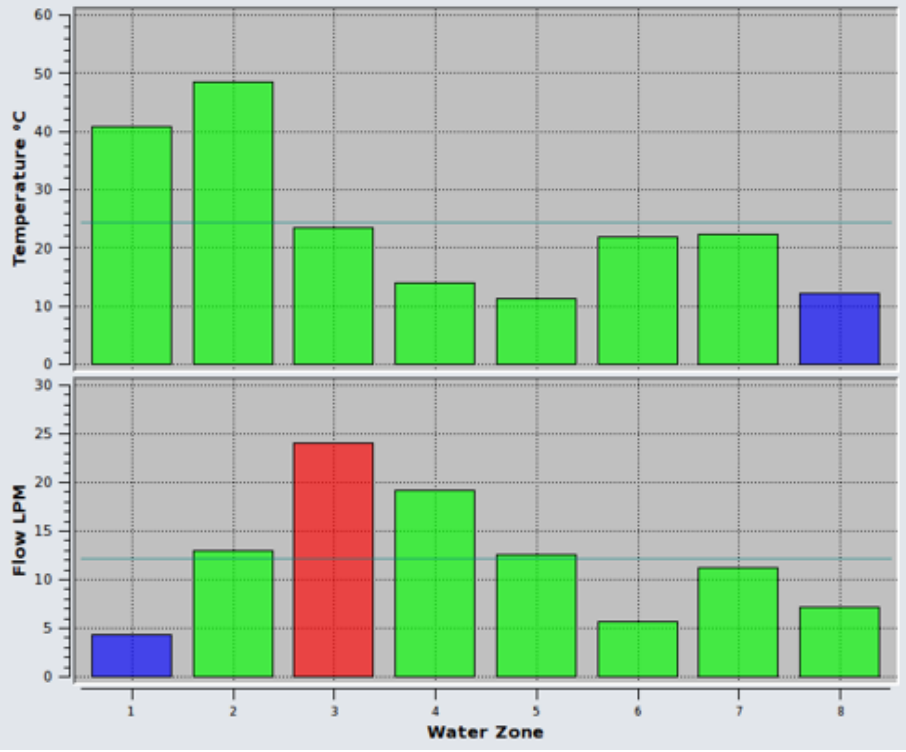
LINUX 2.52

Water Zone Graphs:

If you have water-zones fitted, you can graph the zone temperatures and flow-rates and view the history data just as you would a normal temperature-controlled zone. Add up to eight water-zone traces and the average trace in the normal way, as described above.

Bar Graphs

This is a useful way to visualize all the water-zones simultaneously. Each zone is represented as a bar. Green bars indicate that the zone is in-limits. Blue bars indicate a zone which is under-limit and a red bar indicates an over-limit zone. The limits can be set by a supervisor in the water-zone configuration panel.



The thin blue horizontal line represents the average value. These graphs are updated once a second.

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