

Key functions of Insight Oven Tracker

Oven zone markers

Memos Add comments: select Edit > Memos.

Tolerance curve Provides an envelope of acceptability against which to compare the temperature profile (see Help).

Oven bar and mimics Display a distance axis and summary of the oven's features: select View > Graph Options.

Analysis Window Analysis modes selected by tabs (see opposite). Data in red cells is out of tolerance.

Paqfile tabs Open multiple profiles, and switch between them.

Probe toolbar Click probes to remove them from the display and from the analysis.

Alarms A 'fail' indicates out-of-tolerance analysis data (see opposite) or problems during the run.

Mouse-operated zooming Drag out an area to zoom into. The data grid and analysis then apply to that section of the data alone.

Movable splitter bar Choose how much of the screen to devote to the graph or to the data.

Probe Window Display a picture of your product, showing probe positions: select Process > Process Details.

See Insight's **Help system** for full details of these and many other functions.

Probe	Maximum (°C)	Min. Reached (process 40)	Mean (°C)	Deviation From 6.0°C	Standard deviation	Minimum (°C)	Min. Reached (process 4)
#1 Top Left	153.0	15.53.00	115.1	+188.0	54.8	18.8	-22.5
#2 Top Right	152.0	15.58.00	114.2	+182.0	56.0	30.5	-22.5
#3 Metal Top Left	152.0	15.57.00	113.2	+182.0	56.0	20.4	-22.5

Reset the logger
Before a profile run, set the data-collection parameters: **sample interval**, multiple- or single-run mode, telemetry, trigger mode and SmartPaq operation.

Download data
After a profile run, transfer collected temperature data from the run to the PC.

Wizards
Select a wizard to guide you, step by step, through various operations.

- Open a **Paqfile**.
- Setup a new **process**, or a new oven, product or recipe.
- Create a new **tolerance curve** to compare with your data.
- **Reset** the logger.
- **Download** data.
- Use **Statistical Process Control** to identify trends in your profile results.
- Setup **Datapaq Value** analysis (see opposite).

Statistical Process Control
Identify trends in your analysis results over time.

Save the results
For future use, save the results of your profile run as a **paqfile**.

Email the results
Send the profile results as an email. In case the email recipient does not have Insight, the email contains a link to download free **Paqfile Viewer** software with which to view the temperature profile.

Print report
Print a comprehensive report of the data and its analysis. To customize the report, select File > Print Options.

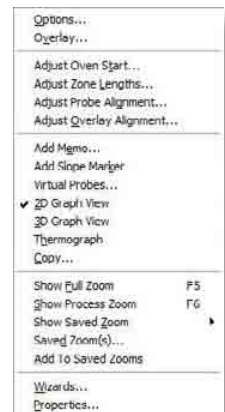
Mouse right-click
Right-click on the graph to show a menu of commonly used options, including:

Overlay Overlay different temperature profiles and/or tolerance curves on the same graph for direct comparison.

Adjust Oven Start Reposition the markers for oven start and process end in a paqfile.

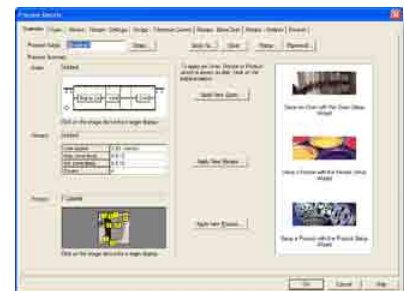
Copy Exports a paqfile's data to the Windows clipboard – as text or as spreadsheet data.

Zoom Zoom into different parts of the temperature profile.



Process files*

Create template files that specify the details of your process. Apply them to your data to permit rapid interpretation and analysis.



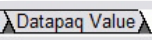
Help
In any dialog, press the **Help button** for information specific to the operation you are performing.

* Feature available in Oven Tracker Professional only.

The analysis options

See Insight's **Help system** for full details of using the analysis modes.

Datapaq Value

 Insight compares the coating manufacturer's recommended curing time/temperature with the actual time/temperature values experienced by the product and generates an **index of cure** which indicates the degree of compliance.

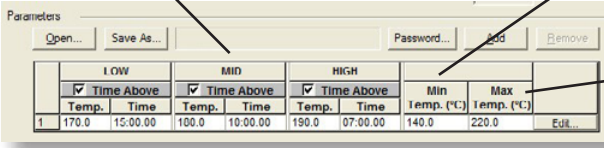
- Input cure-schedule information from your coating supplier: click the Options button , or use the Wizard .

Assess the Datapaq Value obtained during a profile run:

- Generally, **near 100** indicates **cure OK**
- Significantly **less than 100** indicates **under-cure**
- Significantly **greater than 100** indicates **over-cure**

From quality-assurance tests, find the range of Datapaq Values (e.g. 80–140) which gives you acceptable coating cure-quality. Datapaq Value then becomes

Three coating cure schedules (low, mid and high Time at Temperature settings).




Temperature at which curing (cross-linking) starts.


Temperature above which coating damage is possible.

	LOW		MID		HIGH		Min	Max	
	Time Above	Temp.	Time Above	Temp.	Time Above	Temp.	Temp. (°C)	Temp. (°C)	Edit...
1	170.0	15:00.00	100.0	10:00.00	190.0	07:00.00	140.0	220.0	


a rapid means of ensuring that the process is in control.

The **Datapaq Value Data*** tab shows the Datapaq Value for every data point in the profile run, in both in numerical and graphical form.

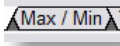
 For each analysis mode, click on the **Options button** in the Analysis Window to **select parameters** for that analysis.

 Click button to **edit the probes' names**.

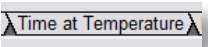
Bakechart*

 A graphical alternative to **Datapaq Value**, comparing the cure results with an envelope of acceptable time/temperature values. The **BakeChart Data tab** shows the data as a table.

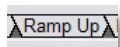
Maximum/Minimum

 Analyse the **maximum and minimum temperatures** achieved by each probe.

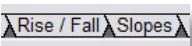
Time at Temperature

 Calculate the time at which a specified temperature is reached, and the time for which the product was at, or above, that temperature.

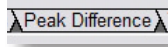
Ramp Up*

 Calculates the **profile slope over a given time range**, and gives the **time taken** to reach a given cure temperature.

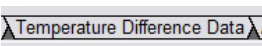
Rise/Fall and Slopes*

 Calculates and analyses the **rates of heating and cooling** for each probe.

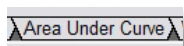
Peak Difference

 Data for the **two probes which recorded temperatures with the biggest difference** at any single point in the profile.

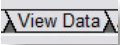
Temperature Difference Data*

 Display the **difference in temperature between any two probes** throughout the temperature profile.

Area Under Curve

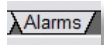
 Calculates the area which lies **below the temperature profile curve** but above a threshold temperature.

View Data

 Display the **raw temperature data for any point** in the profile.

- Click on the probe-trace of interest.
- Drag the vertical bar to the appropriate position and read time and temperature information.

Alarms

 See when and why an **alarm condition** is triggered, caused by out-of-tolerance analysis results or by (e.g.) logger going over temperature, low battery or invalid measurements.

* Feature available in Oven Tracker Professional only.

