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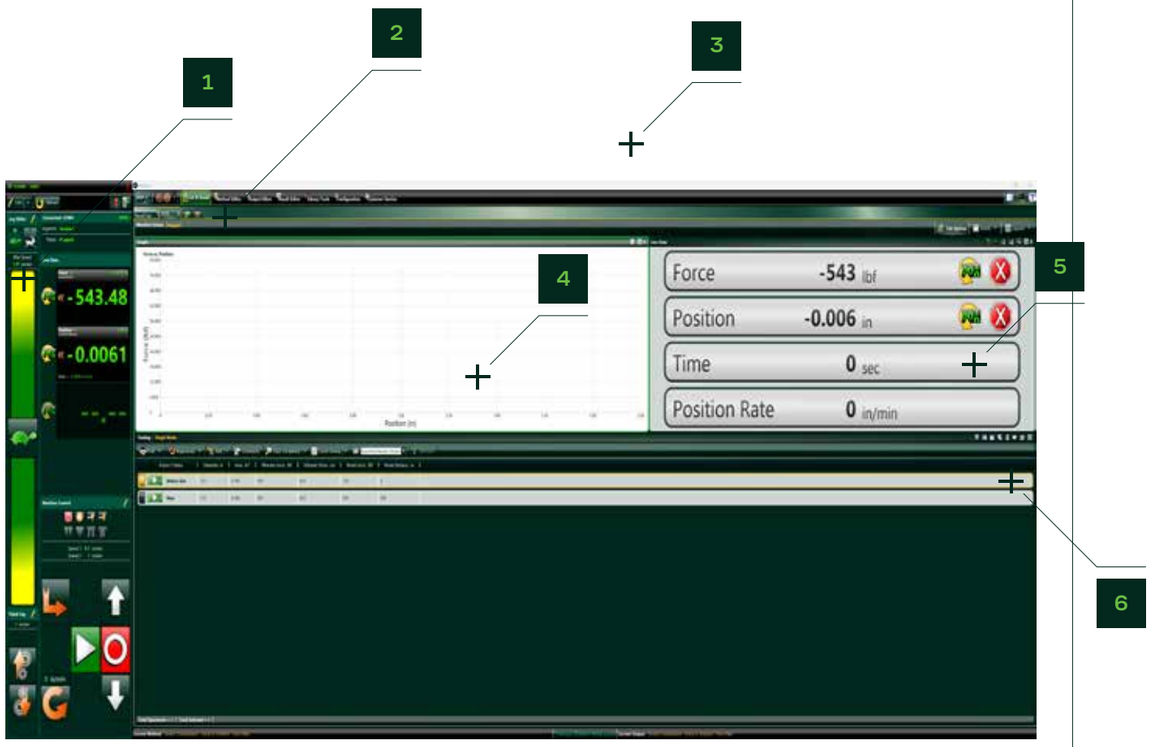
# Horizon Software

Materials testing, analysis and reporting software


Tinius Olsen

# Horizon Materials Testing Software




**Horizon software from Tinius Olsen is an advanced, data-centric platform engineered to meet the evolving needs of materials testing and analysis.**

Designed for seamless integration with a range of Tinius Olsen testing systems, Horizon delivers a powerful and adaptable solution that supports both research-intensive development and standardized quality assurance work.

At its core, Horizon is built around three fundamental principles: productivity, repeatability, and traceability. These principles drive every aspect of its architecture—from its easy to use design to its customizable testing workflows. Whether you're performing high-throughput QC testing or complex R&D tasks, Horizon ensures reliable data acquisition, real-time control, and consistent test outcomes.



1

**System controls window**

From here you have complete control of the system running the test.

2

**Tabbed testing area[1]**

This section can highlight different tabs to indicate the different systems that are connected to Horizon Software.

3

**Typical live test screen** showing frame controls and resultant graph.

From this screen there are four key scalable windows that can be edited.

4

**Graph window**

This section can be modified to show multiple graphs.

5

**Live data window**

From here you can choose which data channels you want to monitor.

6

**Test results window**

The selected test results are displayed here at the end of the test.

## Key Features

| | |
|---|---|
| + Test method library | + Report consolidation |
| + Test editor | + Data importing |
| + Tabbed test and recall area | + Data exporting |
| + Multiple machine control[1] | + Webcam functionality** |
| + Output editor | + Multilingual |
| + Method editor | + Result editor |
| + Multifaceted security | + Touchscreen enabled* |
| + Automatic report printing | + Automatic report PDF save/email |
| + Multiple selected graph on summary report | + Grouping results by identifier on a report |

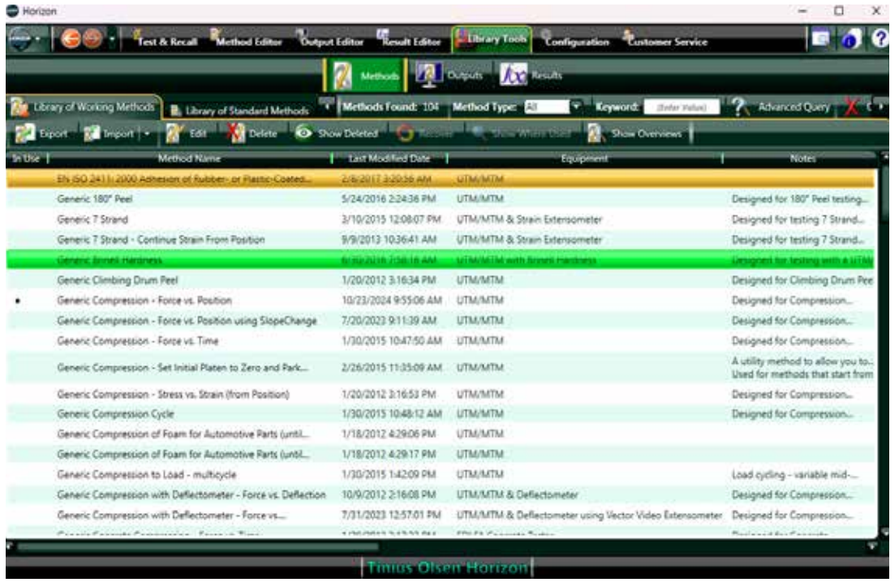
* Requires a touchscreen monitor and proper cables.

** Requires webcam and support arm.

[1] Proper software configuration is required.

# Method Library and Test Area

1

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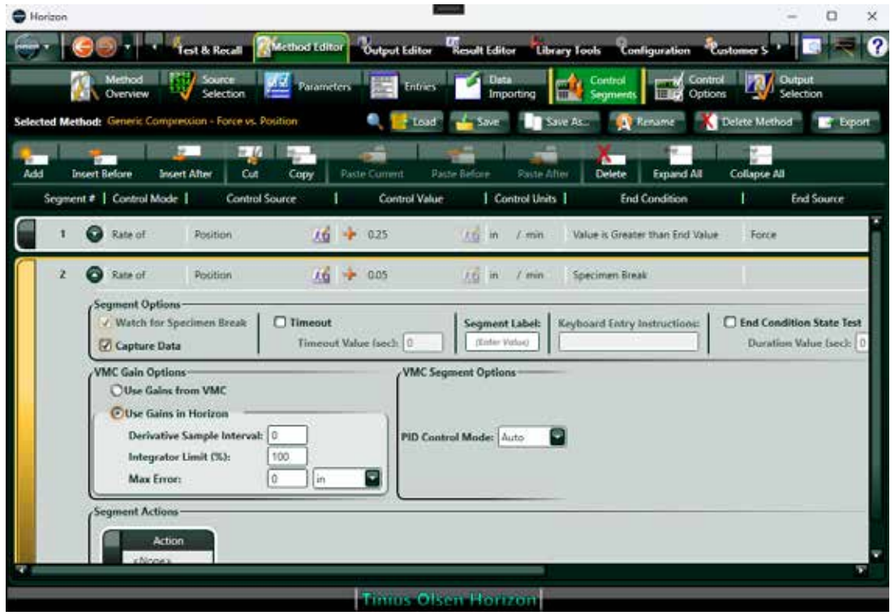





**If your testing regimen follows a quality control analysis to a variety of international standards, then the Test Method Library is probably the first place you would want to visit. Here you can select your desired test method, which has been written in accordance with different international test standards.**

For example, if you need to test for the melt flow index of incoming resin to ASTM D1238 procedure B, you only need to select that routine from the list in the library. Similarly, if you need to determine the pipe crush strength in accordance with EN802, the tensile strength of a steel reinforcement bar in accordance with ASTM E8, or the Vicat softening temperature of plastics in accordance with ISO 306, simply make the selection from the library, confirm system and specimen parameters and start the tests – just four clicks of your mouse from start-up to testing!

If, on the other hand, you want to develop your own calculated result from a test, using a national standard as a template, you only have to add the result (and calculation) to the output and save the test set-up with your unique name.

Alternatively, you can develop your own test method to give you complete control over how the test system performs over the course of the test. You can program the control segments, control options, specimen parameters, report output and how the test system and software communicate with each other.

## Highlights of Method Library

+ Searchable database of international test standards.
+ Standards from ASTM, ISO, EN, BS DIN and many more.
+ Tests for tension, flexure, melt index, compression etc.
+ Ability to customize the test setup using a standard as a template.
+ Multiple levels and types of security to protect data and equipment.

1

**Library of methods**

Vast library of various International Standards and manually created methods in support of multiple test types.

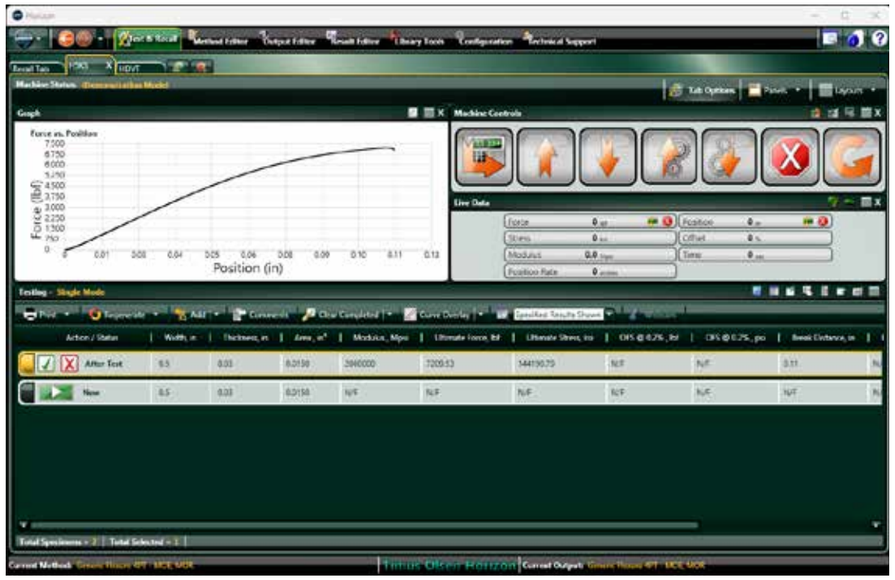
2

**Control segments**

Control segments setup within the Method Editor section of Horizon Software. The number of control segments available for each test and test type is unlimited.

# Tabbed Test and Recall Area

1

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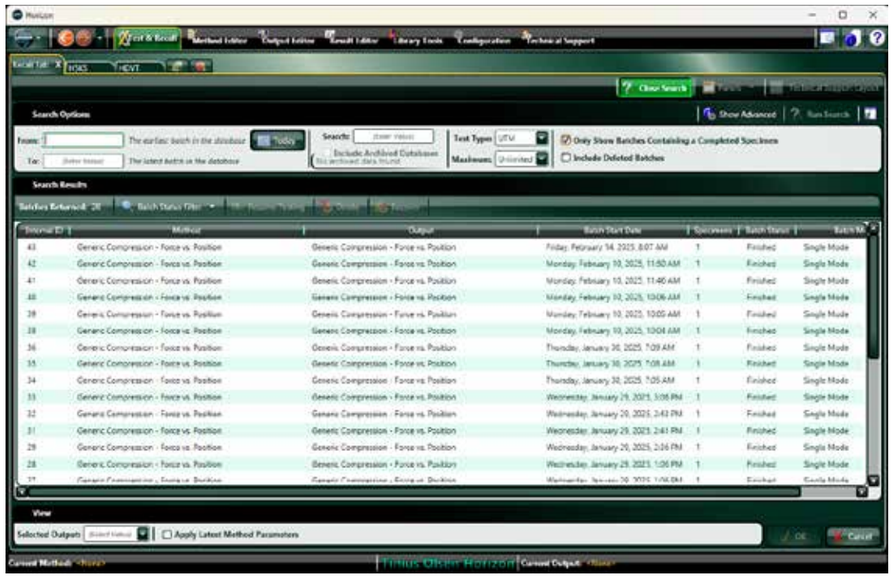





**The next feature you may notice is that Horizon can perform multiple tests at one time, controlling and gathering test data from multiple systems** (assuming that you have proper software configuration and your PC has the necessary hardware to control multiple systems).

This is true whether you're controlling and gathering data from multiple melt indexers, hydraulic universal testing systems; and/or electromechanical testing systems – whether they're performing tensile, compression, flexural, tear, peel, or other tests.

## Highlights of Tabbed Test and Recall Area

+ Examine test results from previous tests while performing live tests.
+ Ability to test multiple machines and machine types, with proper software configuration, sufficient PC power and bandwidth.
+ Multiple graph types can be used for each test.
+ Full PC networking integration and backup across a PC network.
+ Recall function enabling users to add key data perhaps not available, or missed, pre-test.

1

**Test screen**

Test screen showing the tab labeled for 5kN testing system. The software has run the test and ready to start new, while at the same time next tab has HDVT system connected.

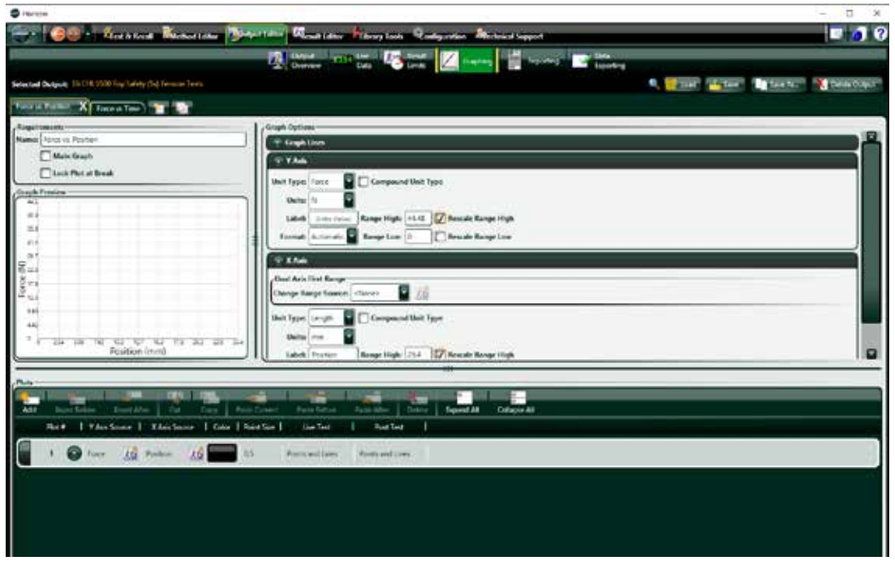
2

**Recall tab**

The first tab shows the recall option where the operator can look for the past tests and the search function enables finding one with some filter criteria.

# Result Editor and Output Editor

1



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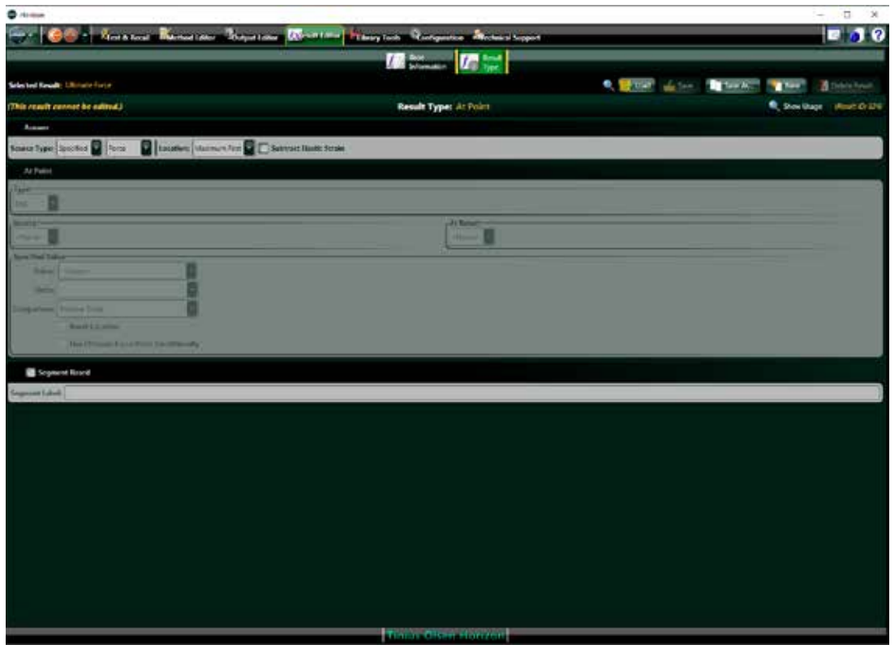


**Multiple, different graphs can be produced per test, using different measurement axes.**

Once all the data has been gathered, Horizon can consolidate it into reports that you can customize to your or your customer's individual needs. The output editor allows unprecedented formatting of your data. You can select what live data can be shown during the test; the acceptable limits of the results; the graphical representation of the test, in multiple formats; the layout of the report including the use of your or your customer's logo; and export or convert the resultant data into another format.

These reports can be distributed across one PC, multiple PCs, or even across a network; the presentation of these test reports is compatible with multiple common formats, including ERP.

## Highlights of Result and Output Editor

+ Multiple graph types can be used per test, such as stress v strain or load v time.
+ Unique results can be calculated that draw on parameters and results from other tests and equipment.
+ Reports can be created in the precise format you desire.
+ Data can be exported to a variety of different formats.
+ An overview enables you to preview what has been created.

1

**Graph set-up**

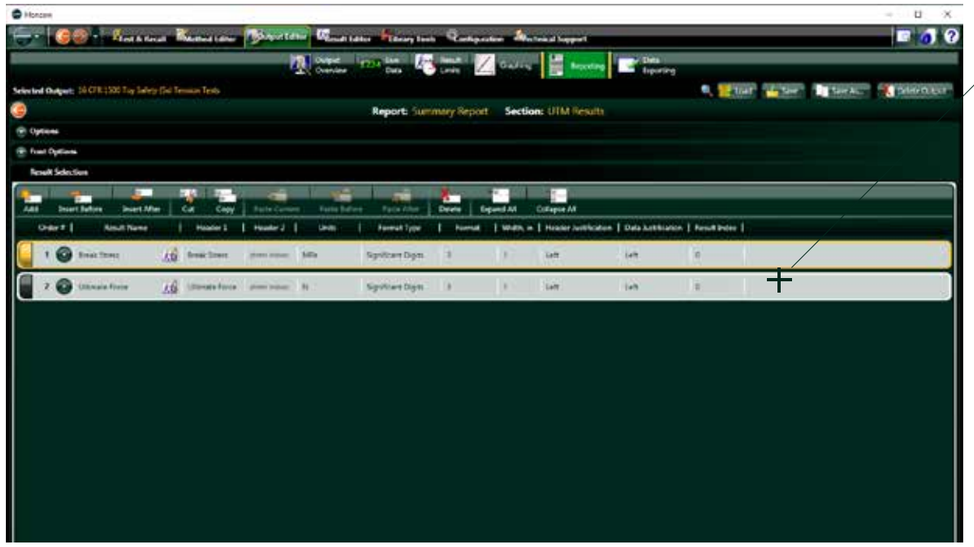
In the Output Editor function of Horizon Software.

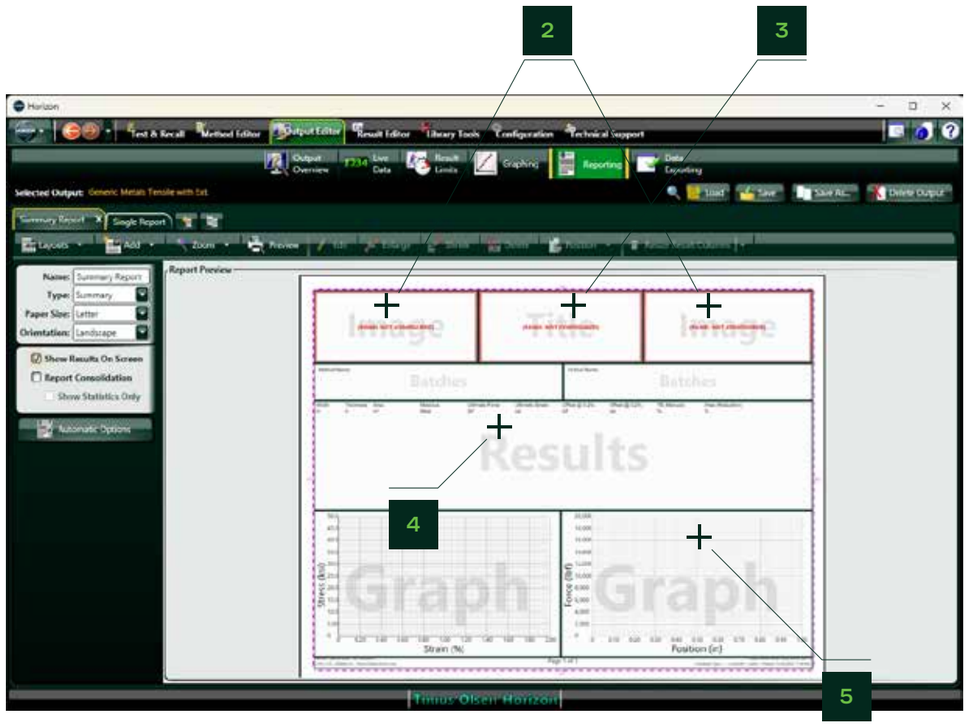
2

**Result editor**

This section helps you to edit the parameters of the result. Customized formulae can be written to create your own unique results.

# Report Generation




## Highlights of Report Generation

+ Multiple graphs used in the test can be displayed in the report.
+ Drop-down list of standard results, and unique results, can be shown in the reports.
+ Reports can be generated using your or your customer's logo.
+ Single reports can be generated for each completed test; additionally, summary reports can also be generated.
+ Common SPC analyses can be preformed and the graphical results printed.

**1** **Result Screen Tabs**

Result Screen Tabs allow the generation of a single test report for each specimen, and also a summary test report. On each report, individual results from drop-down lists, including operator generated results, can be selected for display.

**2** **Logo**

Insert your or your customer's logo As with all sections, the size and location of this section is user defined.

**3** **Title**

Address and/or identification label or title of the report.

**4** **Results Area**

Choose which results to display and report on the single test report. These results, and more, can be included on the Summary Report.

**5** **Graph**

Graph result setup allows axes to be defined along with the size and location of the graph(s).

# Additional Horizon features

## Integrated video capture feature

The analysis and tracking of results through webcam is an advanced feature in the vision system integration with Horizon Software. This upgrade captures the video of sample at the time of testing. This real time video footage is saved along with the graph lines and can be replayed either by play button, video timeline or using any point on the graph. The operator can also move the cursor along the testing curve and watch a frame-by-frame replay which will be synchronized with the 2D graph. These videos can be saved alongwith the results to strengthen the reporting.
**Note:** A webcam alongwith the support arm is required during the test.

## AFM

Horizon has a number of supporting AFMs to facilitate different tasks.

+ Import Data AFM
+ Device Connectivity AFM
+ Formula Generation AFM
+ Report Consolidation AFM
+ Automation (Robotic) AFM
+ Multiple Machine Simultaneous Connectivity AFM




## Horizon remote interface

The Horizon Remote Interface or API gives system and process automation developers the tools and ability to efficiently integrate a Tinius Olsen materials testing platform into their automated process. This facilitates bi-directional interactions covering both data flow and physical actions and responses with and from the Tinius Olsen Horizon materials testing software and hardware.

## Multi users access and security

Horizon supports secure multi-user environments with role-based access control, enabling teams to collaborate efficiently while safeguarding data integrity. With user-specific permissions, audit trails, and networked access to a shared SQL database, Horizon ensures traceability, accountability, and seamless workflow across labs and locations.

## Pre-set colors & Navigation

Up to fifteen user-selectable colors can be saved per Horizon installation (colors will repeat if curves exceed range).

**Navigation** exists within Horizon. Use the Back/Forward buttons to move around the software. A list of previous sections will be remembered so users can jump around easily. This is especially useful when jumping around in the Results Editor.

## Key Features

+ Full PC networking integration and backup across a PC network using industry standard SQL database structure.*

+ Multiple licensing of Horizon for multiple installations to review methods, results and reports away from the testing system, lab or plant.

+ Multi-level user password capability.

+ Recall function enables users to add key data perhaps not available, or missed, prior to the test.

+ Built in Team Viewer licenses enabling Technical Support team to log in directly, upon request, and provide on-system support.

+ Live results during test; there is no limit to the number of results displayed and these do not have to be used in the test report.

+ With proper software configuration, sufficient PC power and bandwidth, multiple testing systems can be run from a single PC.

+ Users can use pre-written international standard's methods as templates to modify and build their own test methods.

* based on recommended configuration (available upon request from Technical Support)

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www.tiniusolsen.com

- Horsham, PA, USA
- Redhill, Surrey, UK
- Noida, UP, India
- Shanghai, PR China
- Dubai, UAE

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