



Horizon Software

Materials testing, analysis
and reporting software

Materials Testing Software

Tinius Olsen is proud to introduce the next evolution of testing software with our Horizon package. As part of our development process, we have taken the best features of our existing software offerings, including Test Navigator, QMat, and EP600 software, added a host of report writing and data manipulation capabilities and, in the process, created a new, unparalleled testing platform that will make easy work of your materials testing programs, whether they're designed for the demanding rigors of R&D or the charting and analysis functions of QC testing.

One of the first features you see within the Horizon software is its use of the most current Windows environments. These familiar formats make it easy to use and learn, especially since the same familiar functionality is maintained throughout the program.

Key features

- Test Method Library
 - Test Editor
 - Tabbed Test and Recall Area
 - Multiple Machine Control
 - Output Editor
 - Multilingual
 - Method Editor
 - Result Editor
 - Multifaceted security
 - Touchscreen enabled*
- * Requires Windows 8 operating system and a touchscreen.

Tabbed Testing area This section can highlight different tabs to indicate the different machines that are connected to Horizon software.

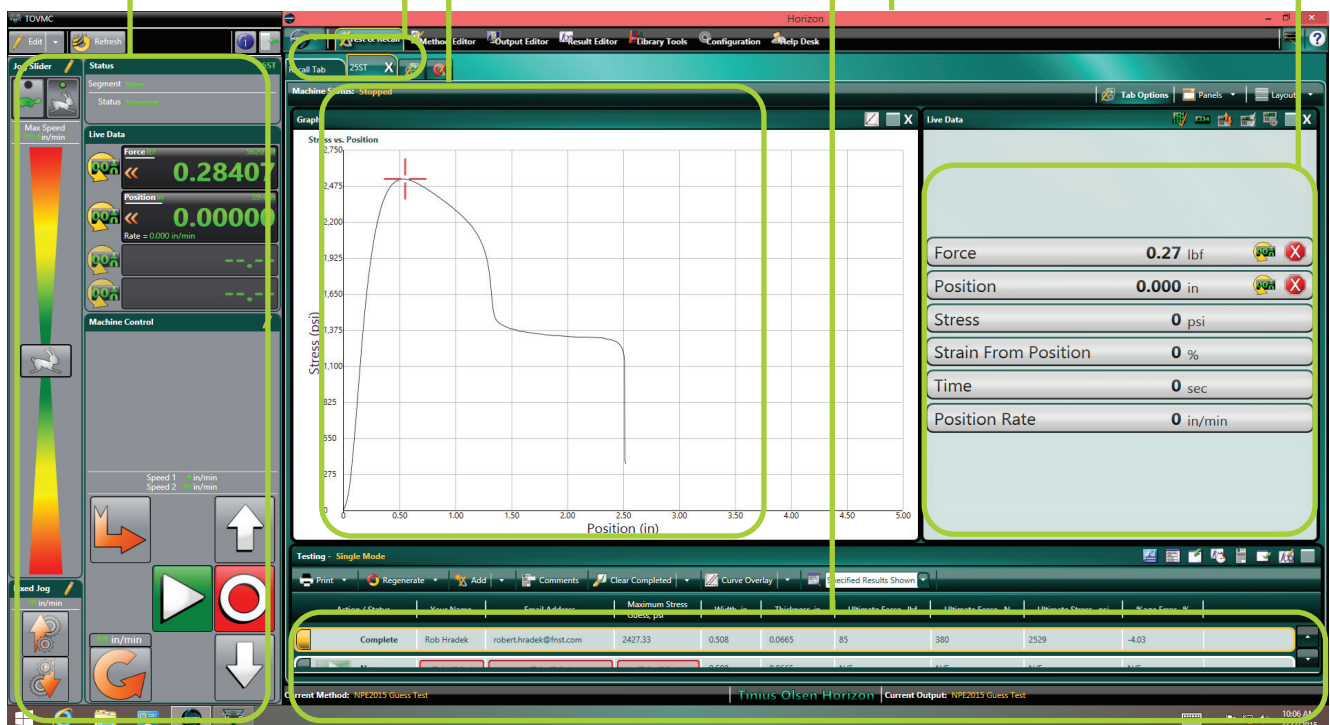
Machine Controls window From here you have complete control of the machine running the test.

Graph window This section can be modified to show multiple types of graph.

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

Typical live test screen showing machine controls and resultant graph From this screen there are four key scalable windows that can be edited.

Live Data window From here you can choose which data channels you want to watch.



METHOD LIBRARY AND TEST AREA

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 will 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 machine 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 machine performs over the course of the test. You can program the control segments, control options, specimen parameters, report output and how the test machine and software communicate with each other.

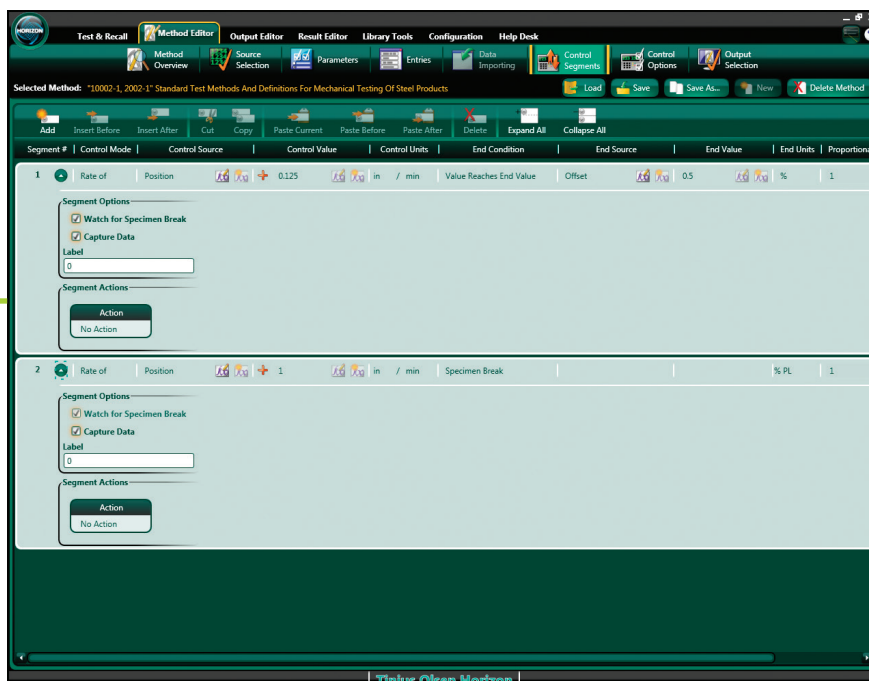
Control segments setup within the Method Editor section of Horizon software The number of control segments available for each test and test type is unlimited, although experience indicates that typically no more than five are generally used.



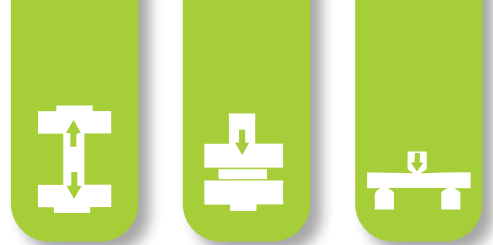
Library search result Looking for a standardised tensile test routine.

Key features

- 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.
- Setups are available in multiple languages and dialects – even create your own!
- Multiple levels and types of security to protect data and equipment.

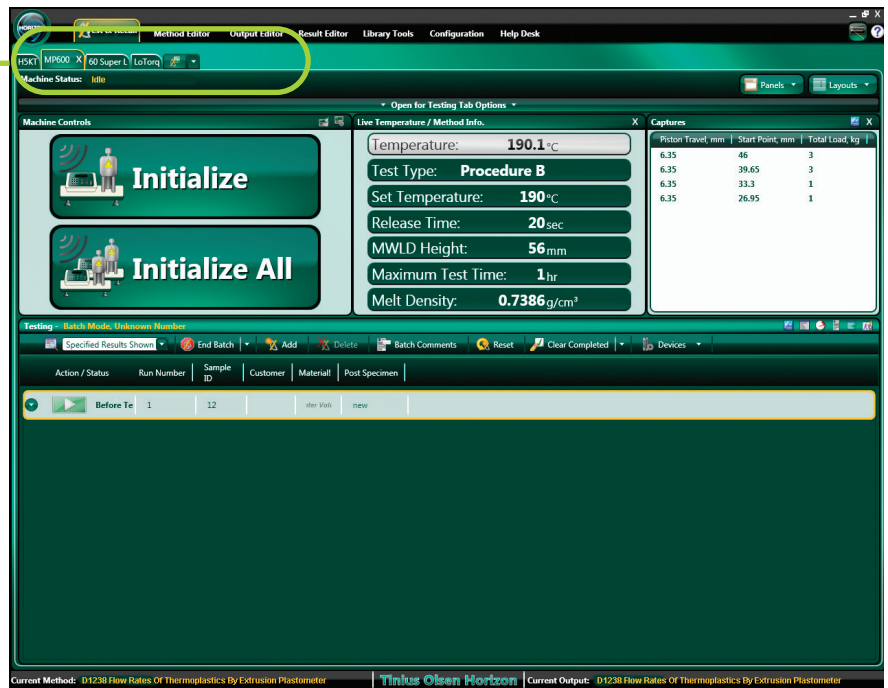


TABBED TEST AND RECALL AREA



The next feature you may notice is that Horizon can perform multiple tests at one time, controlling and gathering test data from multiple machines (assuming that your PC has the necessary hardware to control multiple machines). This is true whether you're controlling and gathering data from multiple melt indexers, hydraulic tensile testing machines; and/or electromechanical testing machines – whether they're performing tensile, compression, flexural, tear, peel, or other tests.

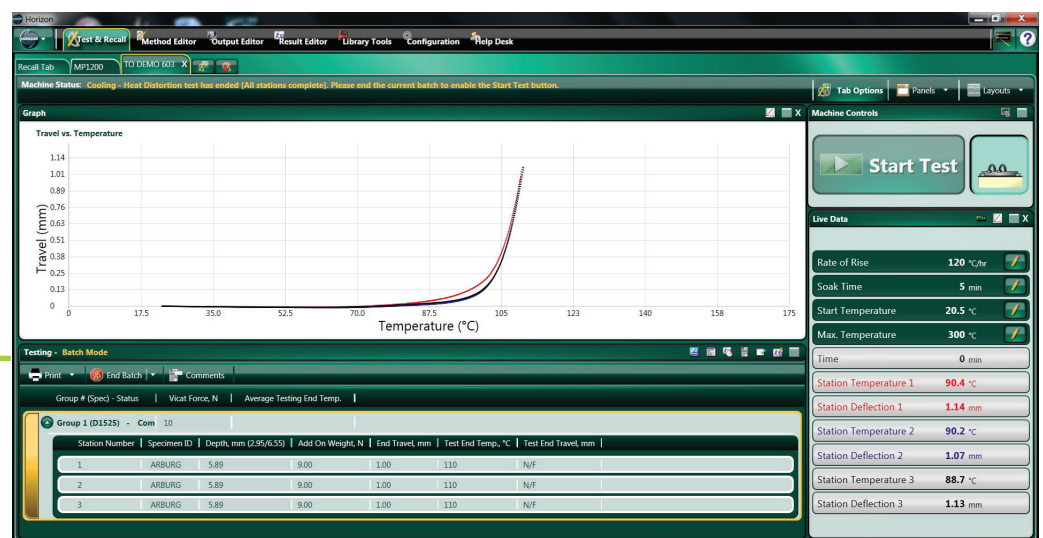
Test screen showing the tab labeled for multiple MP1200 melt Indexers The software is ready to start the tests on multiple MP1200 or MP600 models etc, while at the same time controlling the tests being performed on the first tab. This example is an H5kT tensile tester.



Key features

- Examine test results from previous tests while performing live tests.
- Ability to test multiple machines and machine types, with 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.

Results A six-station Deflection Temperature Under Load test run on an HDTM603.



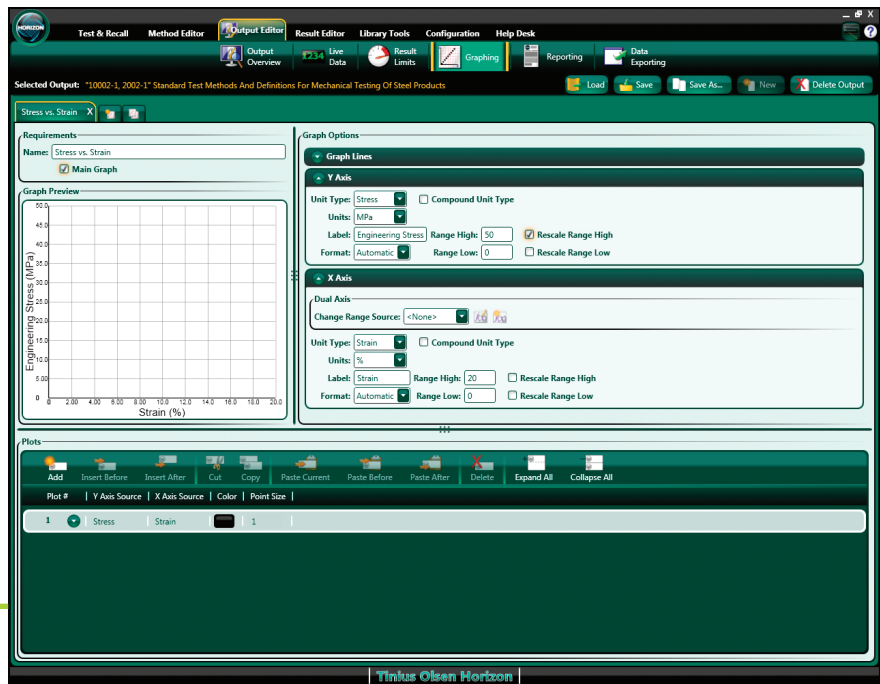
RESULT EDITOR AND OUTPUT EDITOR

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.

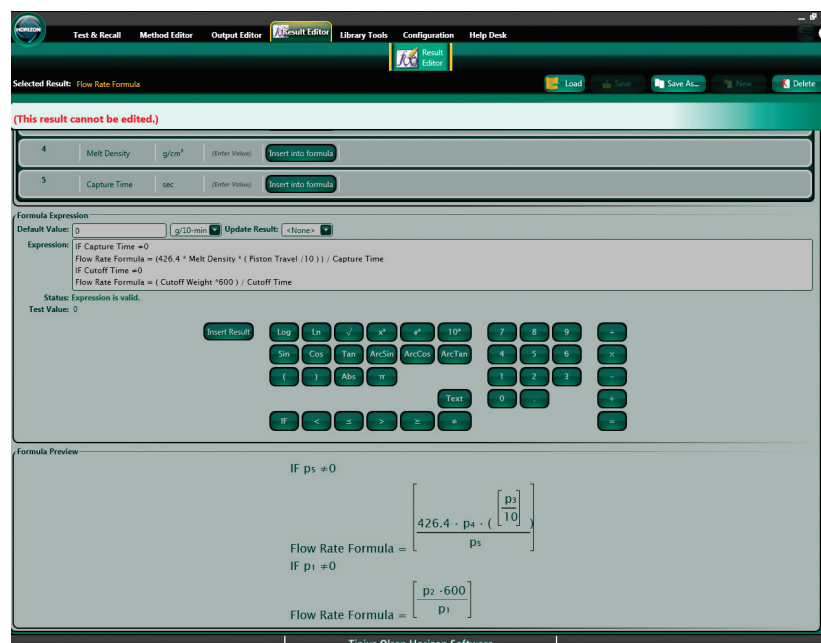
These reports can be distributed across one PC, multiple PCs, or even across a network; the presentation of these test reports is compatible with multiple common formats, including ERP.

Graph set-up In the Output Editor function of Horizon software.



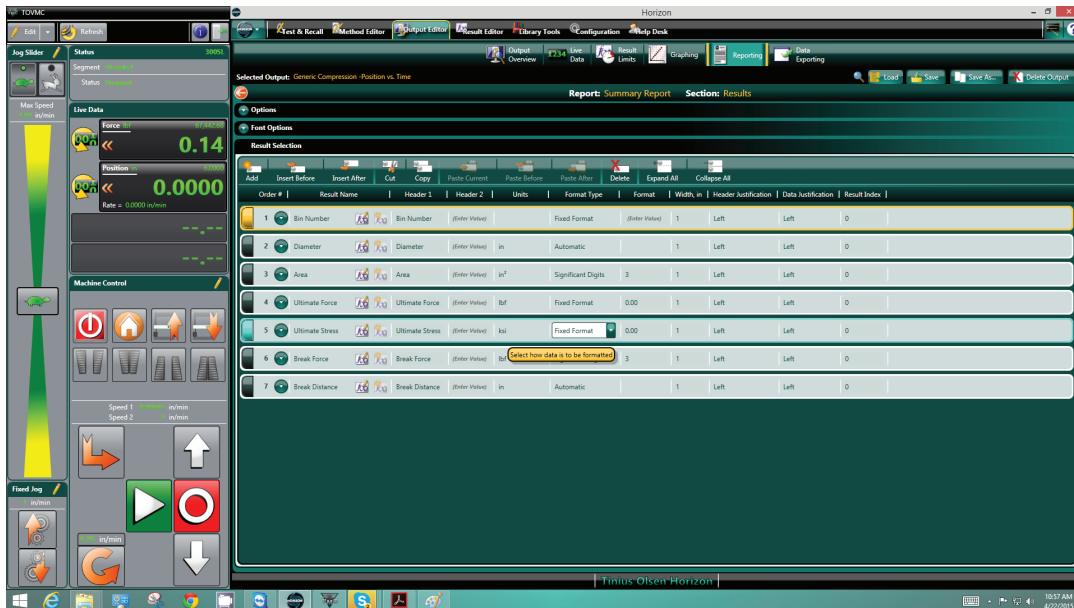
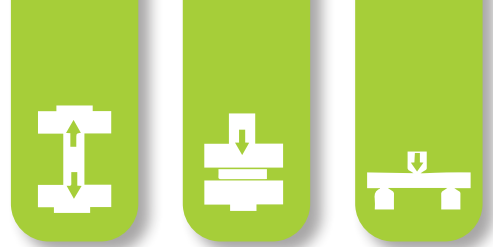
Key features

- 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 generated using your customer's logo.
- 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.



Customized formulae can be written to create your own unique results In this particular example, the result calculation is a 'standard' result and consequently uneditable and grayed out.

REPORT GENERATION



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.

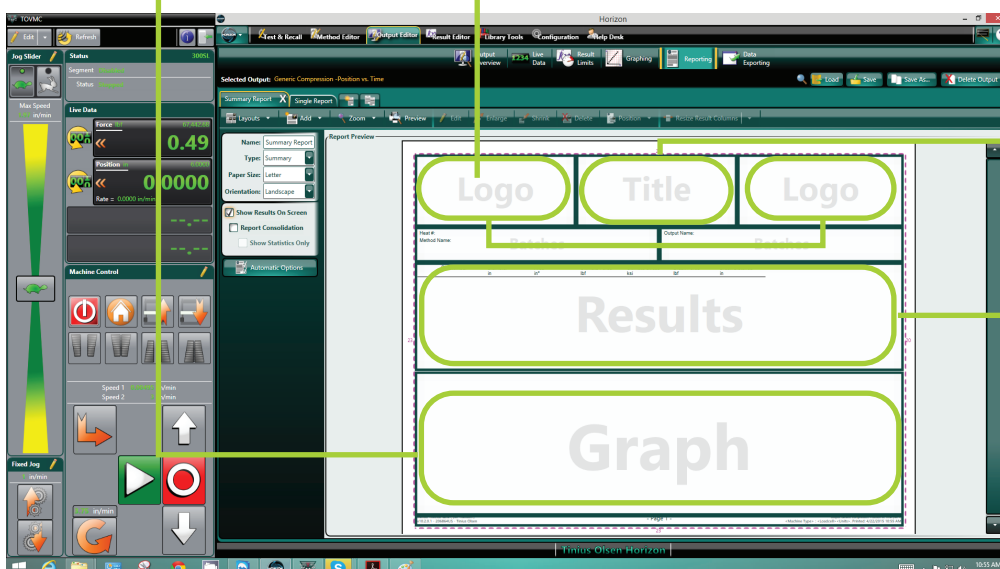
Key features

- Multiple graph types 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.

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

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

Address and/or identification label or title of the report



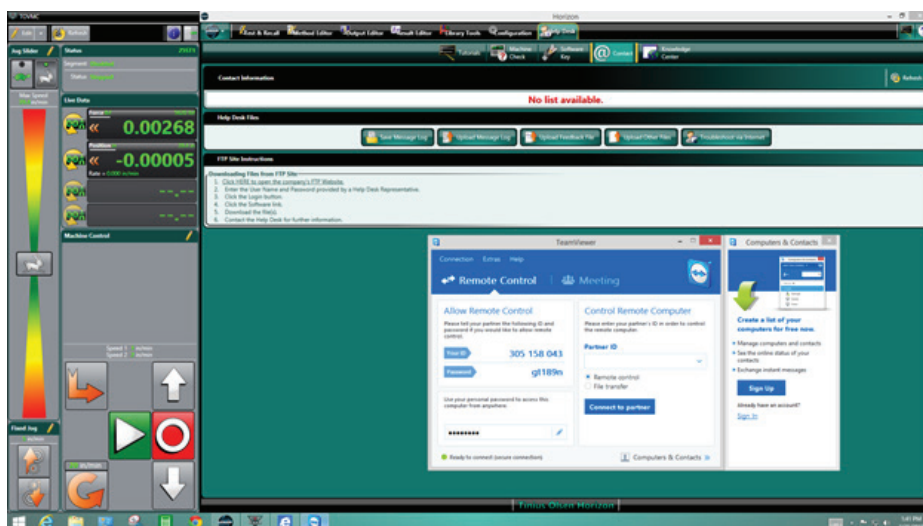
Results Area Choose which results to display and report on the single test report. These results, and more, can be included on the Summary Report.

HELP DESK AND SUPPORT



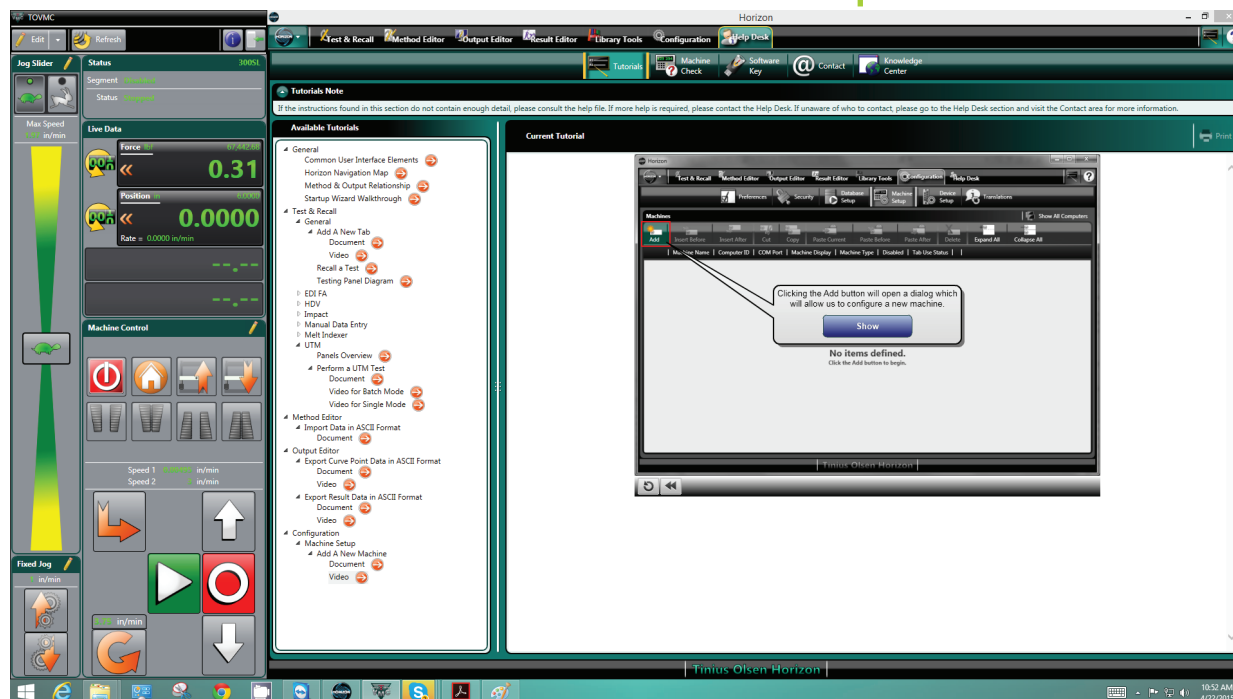
Horizon is one of the most technologically advanced testing software suites but it has retained the two key criteria of value and simplicity throughout the development process.

If you have any questions on the operation of the software or how to generate different reports, the program provides built-in tutorials, on-line help and access to the Tinius Olsen Help Desk.



Help Desk launch page From here you can access on-disk/on-line tutorials, details of the program key, and email our manned Help Desk. You can also access Team Viewer, which allows our software engineers to take control of your computer for test set-up or control help.

As an additional resource, you can also link directly to our application-based microsites, which feature an **Ask-The-Expert** forum where users can put questions to our market and application technologists.



REPORT GENERATION



HARDWARE REQUIREMENTS

- 2GHz Pentium Dual Core or better.
- 8GB RAM:
 - Using multiple testing machines may require additional memory and/or a faster processor.
 - 32-bit systems are limited to a maximum of 4GB, of which only 3.25GB is available due to system overheads.
 - 512MB DirectX 10.0 capable video card or better.
 - A non-integrated Video Card is recommended for best performance.
 - 40GB of available hard disk space (minimum).
 - Note: SQL Server 2012 Express (installs with Horizon) requires a minimum of 6GB.
- Machine communication:
 - RS232 Machines (i.e. 398, SR2, S-Series, T-Series, 602, MP993, MP600, Impact and HDV).
 - One port per testing machine is required. The port may be either an integrated RS232 port or USB port using an RS232/USB adapter.
 - USB machines (i.e. MP1200 and VMC controlled).
 - One USB port required per testing machine
- Additional ports:
 - One USB port for use with the software key (required).
 - Ports required for each measuring device, barcode scanner, etc.
 - One USB port and one display port if using touchscreen purchased from Tinius Olsen.
- DVD-ROM drive (to run installation DVD).
- Mouse or pointing device and keyboard supported by Windows.
- Monitor:
 - 32-bit color.
 - 1600 x 900 (sidescreen) or higher.
 - If a touchscreen is used, Windows 8 (or above) is best.
- Windows-compatible printer, for reporting capabilities.
- Windows-compatible sound card and speakers for audio playback.
- An active internet connection (for TeamViewer use and Help Desk support) is recommended.

SOFTWARE REQUIREMENTS

- The Horizon Software is designed for 32-bit and 64-bit operating systems running Windows Vista SP2, Windows 7 SP1 or Windows 8. It will NOT install on anything below these (i.e. Windows XP, Windows Vista SP1, Windows 7).
 - Note: A 64-bit operating system is preferred for best performance.
 - Note: If using Windows 8 (or higher), the '.NET Framework 3.5' Windows feature must be enabled before attempting installation.
- Internet Explorer 8 or higher.
- Once installed, users must be granted full read/write access to the installed software folders (i.e. the Horizon and Microsoft SQL Server folders).



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 machine, 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 TO engineers to log in directly, upon request, and provide on-machine technical 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 sufficient PC power and bandwidth, multiple testing machines can be run from a single PC.
- Users can use pre-written international standards methods as templates to modify and build their own test methods.



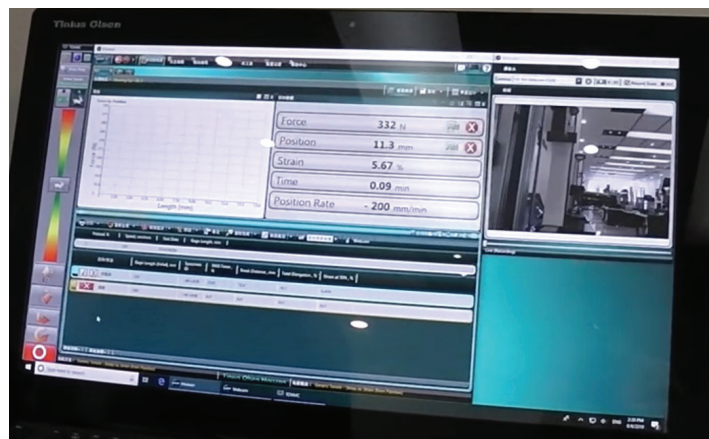
HORIZON WEBCAM FUNCTION

Material testing, analysis and reporting software has gone through a lot of upgrades since its inception. This new upgrade in analysis and tracking of results through webcam is a revolution 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. These videos can be saved along with the results to strengthen the reports.

Note: A webcam along with the support arm is required during the test.

Key features

- Ability to video record a tension, peel, compression, shear or bend test on a Tinius Olsen ST, SL or L series materials testing machine, store the video as part of the test output package and replay it synchronized with the 2D graph output. The operator can move a cursor over the test graph and see the video change frame by frame precisely corresponding with the cursor position on the graph in support of analysis
- Further enhancement of the already totally flexible report formatting function allowing users to format results headers in bold, italics and underlined.
- Ability to define colours for on screen test curves and in reports in support of quick test specimen identification
- Ability to separate batch level results and specimen level results automatically when exporting at the end of a batch
- Ability to take a screenshot of Main Window and save it as an image file for inclusion in test reports and strengthen traceability
- Ability to colour shade specific results rows in test reports – highlighting results of specific interest





HORIZON

Torsion Testers

SL Testers

SL Testers

Hardness

Civil Engineering Products

HDT/Vicat

Melt Flow

Plastic Impact

Metal Impact

Tinius
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Tinius Olsen Automated Testing Systems



PRODUCTIVITY

More tests with increased accuracy

FLEXIBILITY

Complete automated testing solutions

REPEATABILITY

Automated systems that run all day and all night

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The first name in materials testing





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Materials testing, analysis
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