The Release notes documentation for the Mastersizer V1.20 software contains:

- **Addendum to: Software Update Notification for Mastersizer 3000 v1.20 (PSS0223-06)**
  Extracting and installing self-extracting software (Mastersizer 3000)

- **Software Update Notification:**
  PSS0223-06: Mastersizer 3000 v1.20 software

Please read all the information in the Release notes documentation BEFORE starting the software download
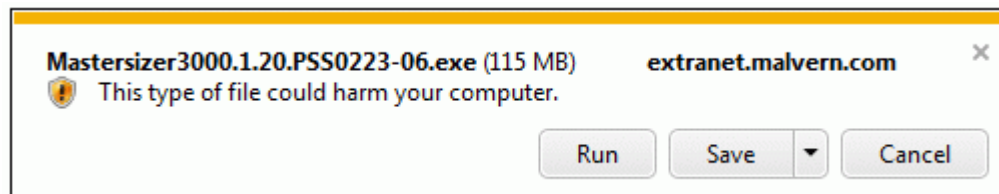
Extracting and installing self-extracting software (Mastersizer 3000)

The software file that is to be downloaded (**Mastersizer3000.1.20.PSS0223-06.exe**) is a self-extracting archive of the standard Malvern CD contents with the Adobe Acrobat Reader software removed. The steps needed to extract and install the software are as follows:

1. Download the **Mastersizer3000.1.20.PSS0223-06.exe** file to your computer. When you click on the download link, depending on your browser security settings, the following type of message may appear.

    Mastersizer3000.1.20.PSS0223-06.exe (115 MB)   extranet.malvern.com   ✕
    This type of file could harm your computer.

    [Run] [Save] [▾] [Cancel]

    Click the **Save** button and the file will begin downloading. Once downloaded, you will be prompted with the following message.

    The publisher of Mastersizer3000.1.20.PSS0223-06.exe couldn't be verified.   ✕
    Learn more
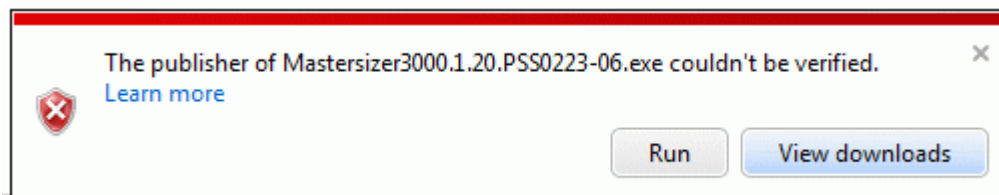
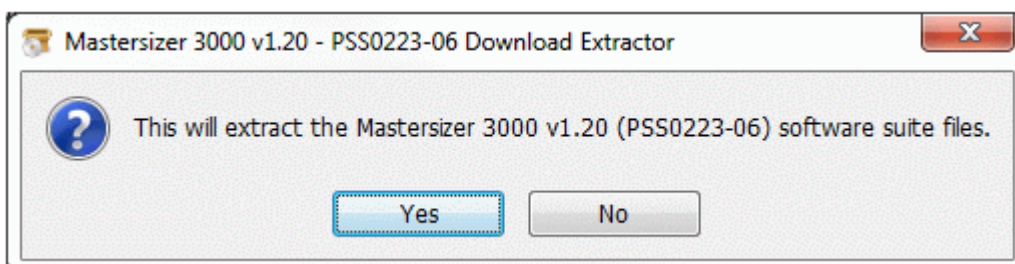   [Run] [View downloads]

    Click the View downloads button. A Windows Explorer window will be shown and the **Mastersizer3000.1.20.PSS0223-06.exe** will be selected.

2. Right-click on the **Mastersizer3000.1.20.PSS0223-06.exe** file and choose the **Run as administrator** option from the menu that appears.

    Mastersizer3000.1.20.PSS0223-06.exe

    Open
    🟦 Run as administrator

3. The self-extractor will display the following window.

    Mastersizer 3000 v1.20 - PSS0223-06 Download Extractor   ✕

    ❓ This will extract the Mastersizer 3000 v1.20 (PSS0223-06) software suite files.

    [Yes]   [No]

4. Clicking the **No** button aborts the extraction. Clicking the **Yes** button then shows the following prompt.
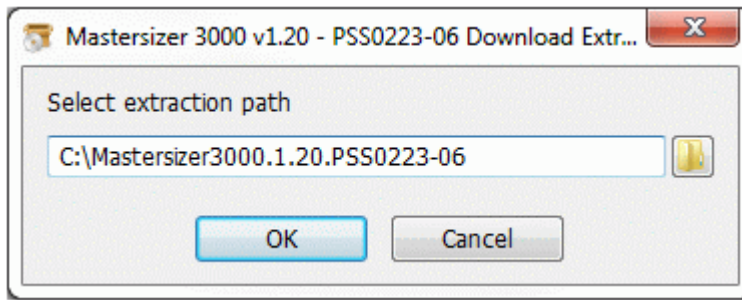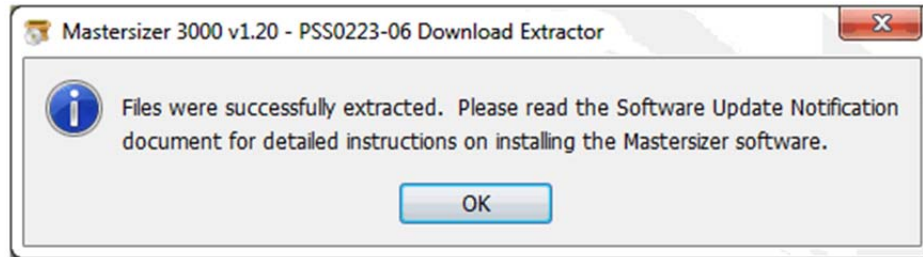

5. If you want to change the folder where the CD contents are extracted to then enter the path into the text box.

6. Click the **OK** button and the files will begin extracting to the folder specified above.
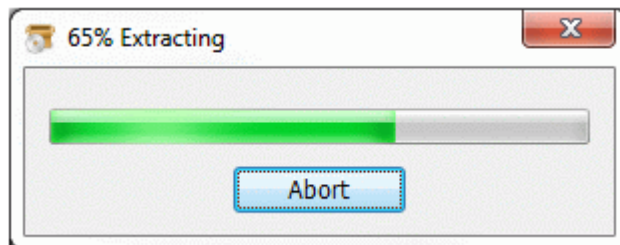
7. Once complete, a Windows Explorer window will open showing the contents of the folder where the files have been extracted to.
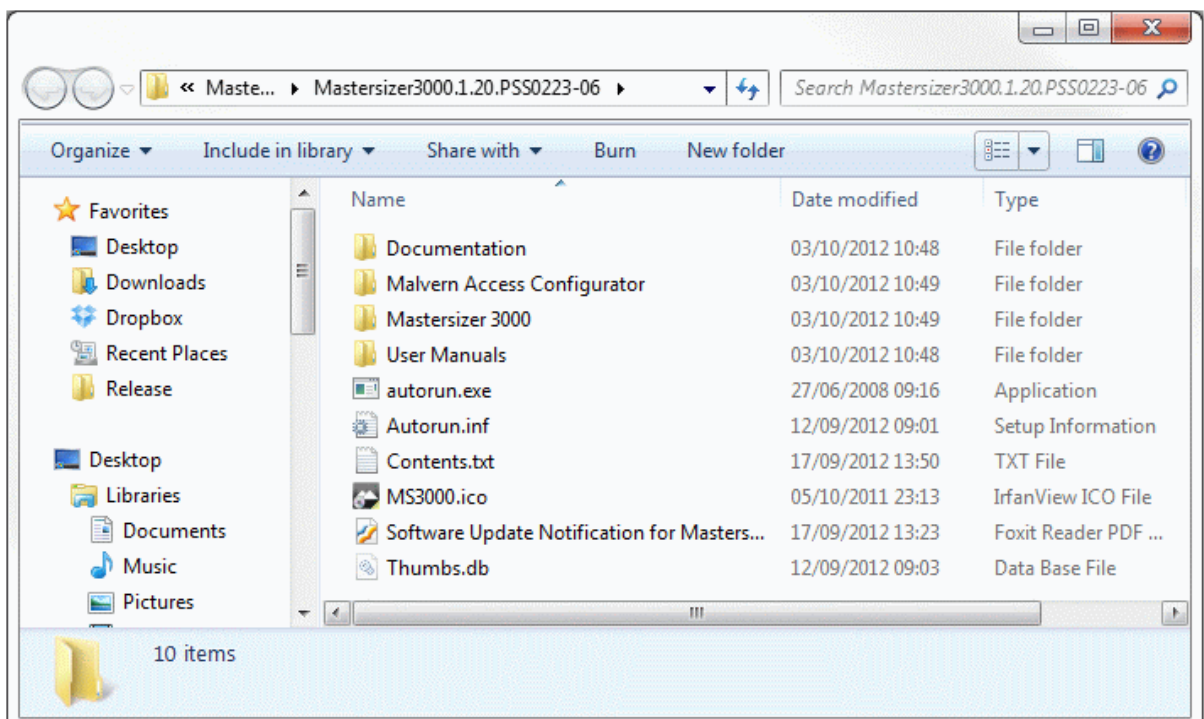
The following message will also be shown.

8. Click **OK** and then read the **Software Update Notification** document as indicated in the message above.

   Depending on which software application the user wants to install then they will launch the **setup.exe** file from the appropriate folder. The choices are:

   - Mastersizer 3000: Launch **\Mastersizer 3000\setup.exe**
   - Malvern Access Configurator: Launch **\Malvern Access Configurator\setup.exe**

   The software installation will now run through as detailed in the Software Update Notification document, i.e. as if launched from the CD.
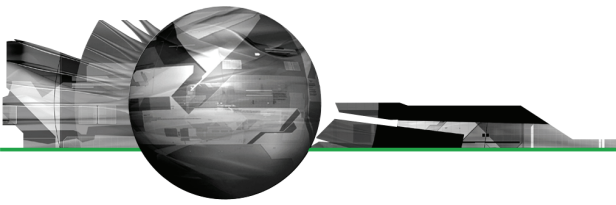
Software Update Notification

PSS0223-06: Mastersizer 3000 v1.20 software

Abstract

This document details the release of software PSS0223-06: version 1.20 of the software for the Mastersizer 3000 laser diffraction system. It covers software issues fixed and new features introduced. This information is required to perform a risk analysis to determine if the software should be installed. In this risk analysis the benefits of the new features provided and resolved software issues must be weighed against the risk of new issues that may be introduced to vital areas of the software or possible changes to the results of future analysis. Installation instructions are provided.

Installation

It is assumed that you have authority to install or update software within your facility. It is also assumed that you have Administrator rights for the system upon which the software is installed, as this is a requirement of the installation process. If you do not have this authority please consult with your I.T. support department before proceeding.

Minimum System Requirements

The minimum requirements for running this software are highlighted in table 1.

Table 1: Minimum system requirements for the Mastersizer 3000 software.

Feature	Specification
Processor Type	Intel Core i5 Processor
Memory	4GB
Hard Disk Storage	250GB
Additional Storage Media	CD-ROM or DVD +/-RW drive
Display Resolution	1024 x 768
Connectivity	1 high speed USB port
Operating System	Windows 7 Professional (32 bit and 64bit)
	Windows XP Professional ™ with Service Pack 3 installed

Although the software can run using Windows XP Professional, it has been fully tested under Windows 7. Windows 7 is therefore the preferred operating system.

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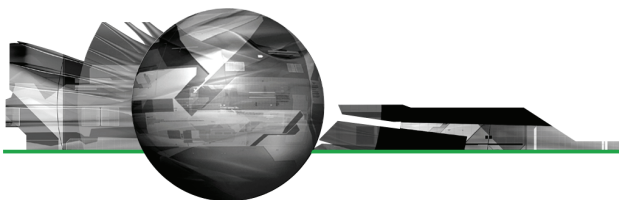
Installation Instructions

The software suite comes on an auto-loading CD-ROM. Inserting the drive into a system configured to Auto-run a CD will run the installation program automatically. If your system does not support this feature, run the **\Mastersizer 3000\setup.exe** program from your CD drive.

> **Note:** It is important that the software is installed before the Mastersizer 3000 instrument is connected to the computer and switched on. This will ensure that the instrument drivers are enabled, and that the firmware updates associated with this release are correctly downloaded to the instrument.

> **Note:** Any firmware updates required for your system will be installed at the same time as the software. It is important to keep the firmware and software 'in sync', since this is the configuration that will have been tested by Malvern Instruments prior to release of the software.

Installing the Malvern Access Configurator (MAC) Application

The software suite includes a copy of the Malvern Access Configurator tool that allows you to manage the security aspects of the Mastersizer 3000. The MAC software may be installed either on the PC used to control the instrument or a separate networked PC. Installing on a separate PC allows you to manage the security centrally.

> **Note:** The MAC software does not auto-install. To install this software, navigate to the **\Malvern Access Configurator** folder on the software CD-ROM and run the **setup.exe** file.

As with all Windows applications, the MAC software must be installed by a user who is an administrator on the host computer. In addition, the MAC software uses the existing Microsoft Windows users and groups configured on the host computer to control access to the Mastersizer 3000 application. As such, prior to installing the MAC, it is important to ensure that the computer running the Malvern software is installed on its host network. If the computer is a stand-alone system, the required users and groups must be configured on the computer prior to the use of the MAC.

Given the above requirements, it is advised that the local IT department review the requirements for use of the MAC application, and are present during the software installation process.

> **Note:** Please read **MRK1828-xx - Guide to setting up access permissions in the Malvern Access Configurator application** and **MRK1747-xx - Mastersizer 3000 - 21 CFR Part 11 Guide** for more information as to how to use the MAC application, particularly when operation is required in a 21CFR Part 11 compliant environment.

Uninstall Procedure

The software can be uninstalled using the standard **Add/Remove Programs** feature in the Windows 'Control Panel'.

Software License Files

The Mastersizer 3000 software requires a valid licence file to run. When connected to an instrument, the system automatically generates this file and the user will be asked to accept the licence.

> **Note:** If you wish to install the Mastersizer 3000 software on additional computers, you will need to follow the procedure below for sharing a software licence.
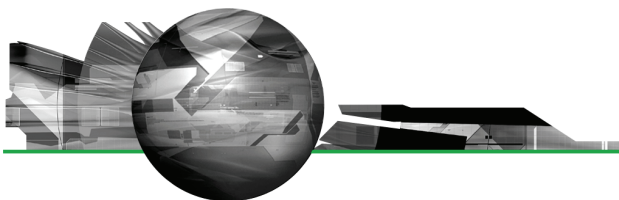
Sharing a license

In order to enable the use of the Mastersizer 3000 on a computer which is not connected to a system, it is necessary for users to create a license. This can then be shared with other users, allowing them to gain access to the software.

To share a licence, follow the steps below:

1. At the PC that is connected to the instrument, run the Mastersizer 3000 software and click on the **Application Menu** icon at the top left of the screen.

2. Select 'About' and click on the **View Licence..** button.

3. Click on the **Share this Licence..** button. The system tells you what information the licence file contains.

4. To accept that information click **Yes** and choose a location to copy the file to (e.g. a memory stick).

5. At the separate PC, install the Mastersizer 3000 software from the CD and start the program. At the licence screen, click the **Install** button.

6. Browse to the folder that contains the licence file from step 4 above, and select the licence file. The licence details will be shown and you can now **accept** or **decline** the licence.

> **Note:** The software licence is specific to a given Mastersizer 3000 system. When a licence is shared, detailed user and computer information is stored in the licence file, ensuring it can be traced back to its source Mastersizer 3000 system. Users should only share the licence with users within their organisations who need to analyse data off-line. **The software licence should not be shared with other organisations without the consent of Malvern Instruments.**

New Features

There are no major new features implemented in this version of the software. However the following changes have been implemented:

| Reference(s)	Issue	Comment
23169	Set the stirrer state (speed and on/off) to the last demanded state following a fill or clean operation.	Implemented
23174	Ensure that the blue light optical properties match the red optical properties if the "Use different values for blue" option is unchecked.	Implemented
22605	Add the current software version to the report footer	Implemented
22627	Make access to private workspaces securable using the MAC application.	Implemented
22132	Provide a visual cue that records are signed or signed and locked.	Implemented
21964	Allow users to define the feed rate and air pressure used during the clean sequence for the Aero S accessory	Implemented
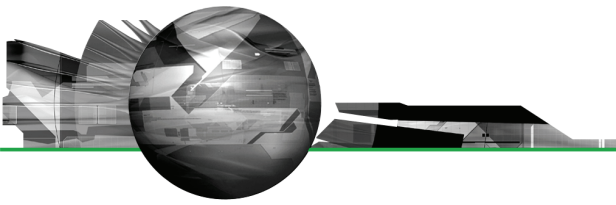
21998	Enable analysis sensitivity as an advanced analysis option, in order to support the transfer of Mastersizer 2000 SOP to the Mastersizer 3000	Implemented
17729	Allow result tables to be displayed using phi units	Implemented
20015	Allow results to be transformed from volume to number distributions	Implemented
15952	Provide an indication to the user that their software licence is about to expire.	Implemented
10642	Provide the ability to roll-back to earlier SOP version.	Implemented
10769	Make records created in 21 CFR Part 11 mode read-only when they are opened on a computer which is not under 21 CFR Part 11 control.	Implemented
9499	Provide a scripting feature which will allow the user to define custom calculations for use in reports.	Implemented
21999	Provide the ability to export undersize and oversize distribution data	Implemented
23742	Amend Hydro MV clean sequence to reduce risk of dispersant spillage	Implemented
23530	Add a 'top-up' step to Hydro MV/LV fill sequences, to ensure the units are full following displacement of air from the measurement cell.	Implemented

Transforming results from number to volume

As part of the Data Processing->Result settings within the SOP and result editor dialogues, it is now possible to select a number distribution output:
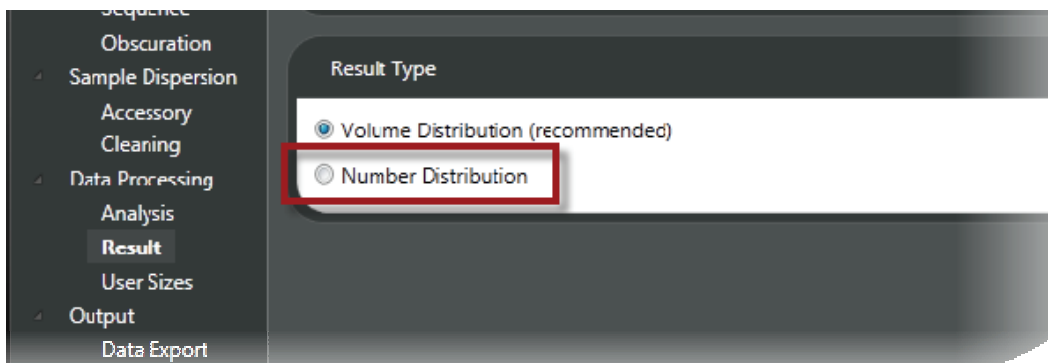
When the Number Distribution option is selected, all of the size distribution and size parameters associated with the created / edited record will be expressed in terms of numbers. For example, percentiles will be shown as Dn50 instead of Dv50, confirming that it is a number-based parameter which is being displayed.

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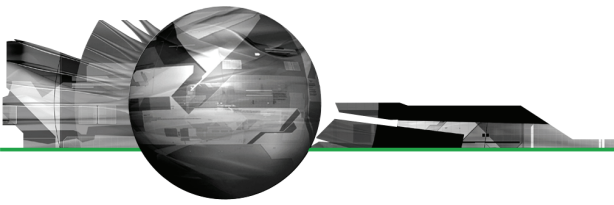
Custom Calculations

A new custom calculation editor is now available as a report item within the Mastersizer 3000 software. To add a custom calculation to an existing or new report, enter edit mode and insert a new report item. From the item selection screen, select the Add a custom calculation option:

From the next screen, select the text output calculation:

This will allow you to define a calculation which output a text string to the report, just as was possible using the Mastersizer 2000 software.

Once the custom calculation item is present within the report, click on the pencil icon to configure it. This will cause a visual basic editor window to appear, where you can enter your calculation. A series of example calculations are provided with the software, as a starting point for your own calculations. To load these, click on the 'load a calculation from file' icon on the right had size of the editor:
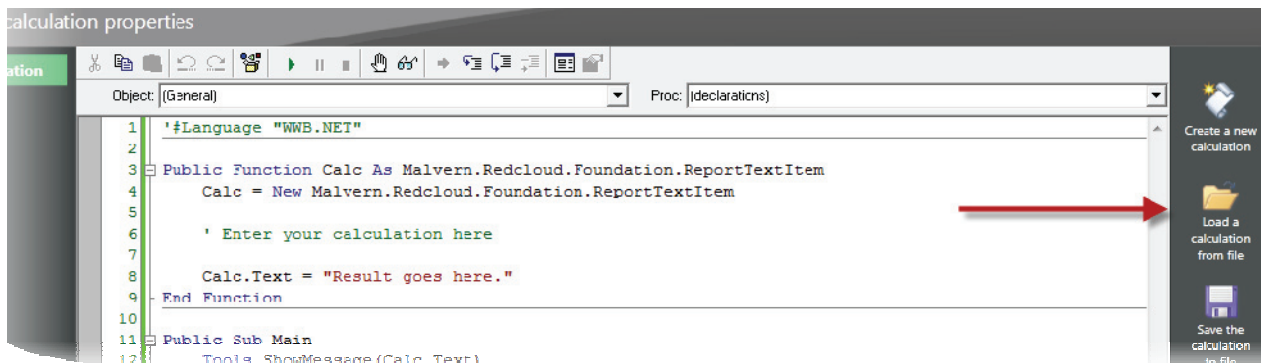

This provides access to a series of example calculations. You can also browse the file system to find your own saved custom calculation scripts.

Fixed Issues

The main issues fixed in this release of the Mastersizer 3000 software are listed below.

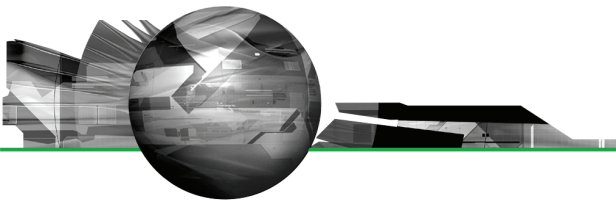| Reference	Issue	Comment
12200	Loading files from a network can be very slow.	Improved
19495 / 19809	Unclear error messages appear when Hydro units are disconnected during a measurement sequence.	Fixed
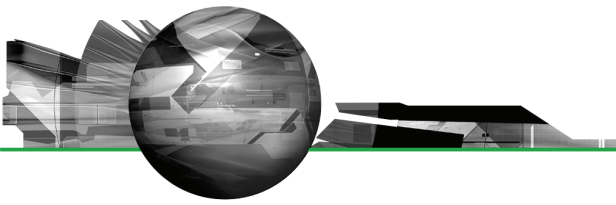
| 21680	Aero S can sometimes not achieve the required feedrate during measurements and clean sequences	Fixed
22399	Autostart measurement delay does not work	Fixed
22833	Feed rate and pressure in dry accessory control in measurement window do not reflect configured values	Fixed
22861	The stirrer on the Hydro units can be reported as being active when it is actually switched off.	Fixed
22969	Aero S clean sequence does not work from the accessory control window	Fixed
23340	It is possible to run SOPs with the incorrect cell type	Fixed
23401	Opening the SOP summary report of one or more SOP can cause an exception to be reported.	Fixed
23408	Software asks the user "Do you want to save changes to you SOP?" when no changes have been made.	Fixed
23398	The software can enter a reset state during the clean sequence for Hydro SM SOPs	Fixed
23700	Instrument starts up in standby mode if it is turned on with no accessory or a manual accessory connected (e.g. Hydro SM)	Fixed
24021	Incorrect records are included in an average result generated at the end of an SOP if the Edit Results function has been used.	Fixed
23775	Software should be installed into a group called 'Malvern Instruments' within the Start menu.	Fixed
23782	The clean sequence for Hydro units can sometimes repeat endlessly.	Fixed

Known Issues

The following software bugs have been discovered within the software, and will be investigated as part of a future release:

| Issue	Work Around	Comment
When graph symbols are displayed in reports, they do not show on printouts.	None available. A fix will be implemented in a future software release.	Software Bug
The System Audit displays duplicated columns for each language under which the system has been run when auditing has been enabled.	None available. A fix will be implemented in a future software release.	Software Bug

Software does not open all files selected when they are opened using Windows Explorer.	Use the Open menu option in the Mastersizer 3000 software to open multiple files.	Software Bug
Software crashes when editing, copying or pasting records	See know issue description below.	Software Bug
Record numbering isn't correct after editing a record or copying and pasting records between files.	Use the work-around described below for the editing, copying and pasting issue.	Software Bug
The results stored within an edited child record to not display in reports after editing or deleting records within the same group.	Use the work-around described below for the editing, copying and pasting issue.	Software Bug
The Contact Malvern feature in the Maintenance window causes the software to crash or displays a message about the wrong parameter format being used.	Manually email the maintenance report text file to helpdesk@malvern.com if support is required.	Software Bug
The active accessory is not always changed when the changing between wet and dry cells.	See know issue description below.	Software Bug
Reports occasionally appear blank or empty even when the record selection in the Records View changes.	Adjust the report zoom slider in the bottom right-hand corner of the report window to refresh the display.	Software Bug
Some text still appears in English when running with a different language selected.	This issue will be addressed in future software releases	Software Bug
An empty error message box is shown in the measurement window if the Hydro EV accessory is disconnected during a measurement.	Accessories should not be disconnected during measurements.	Software Bug
The software does not warn the user when it cannot open a measurement file within the Recently Used list.	This will occur if a file has been moved or deleted. A fix will be provided in a future software release	Software Bug
Record number and detector number values are displayed to one decimal place on trend and data graphs.	None available. A fix will be implemented in a future software release.	Software Bug
Various fields in the Edit result window lose their 'edited' blue background appearance when a different page in the editor is selected.	None available. This is a visual issue only, as the software correctly applies the edit values when the OK button is pressed.	Software Bug

Software Update Notification: PSS0223-06
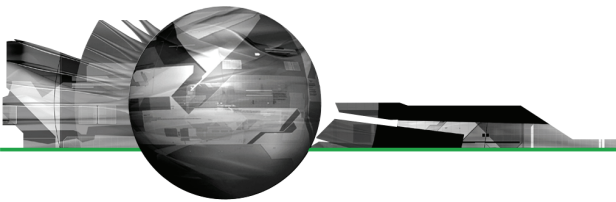
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Software crashes when editing, copying or pasting records.

There have been some instances where record view functions such as copying, pasting and editing records causes the software to crash. The Malvern software team are working on a general fix to these issues, and some improvements in the robustness of the record view interface have been made. In the meantime, if crashes are observed, it is recommended that Record Grouping is disabled within the software options:
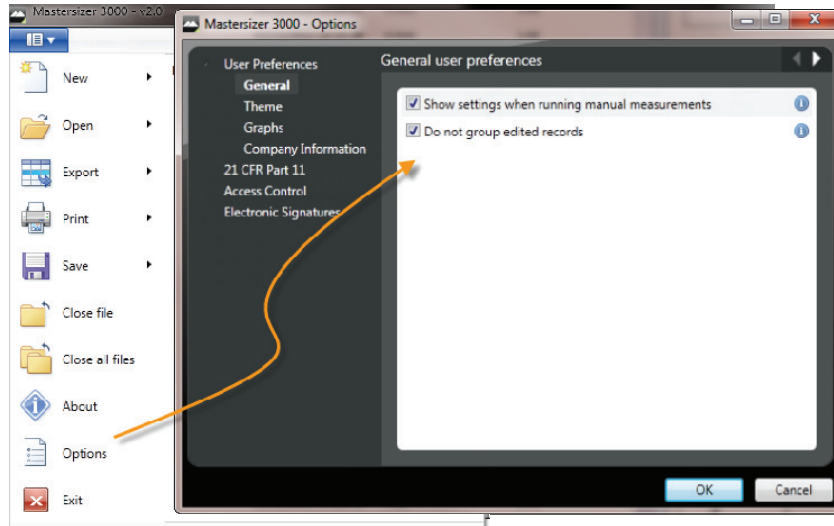

This forces edited version of records to be displayed on a separate row in the records view, in the same way as the Mastersizer 2000 software. In addition, the software may become more stable by docking the Reports tab behind the Records View tab. This can be done by either dragging the Reports tab over the Record View area or by using one of the following pre-defined views that are available in the View tab; *Default, 1-pane tabbed, or 2-pane tabbed*:
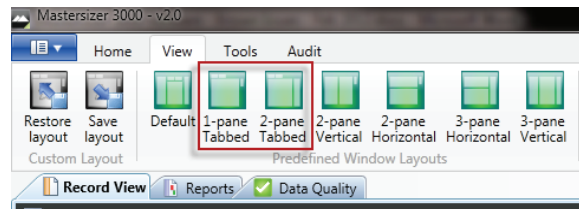

Active accessory does not change when switching between wet and dry measurement cells

Sometimes, the software does not select the correct accessory when users insert the measurement cell into the instrument bench. If this occurs, users should manually select the accessory by clicking on the accessory icon in the status bar of the main software window. A menu will be shown of the available accessories:
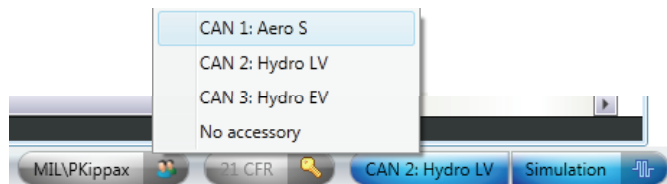
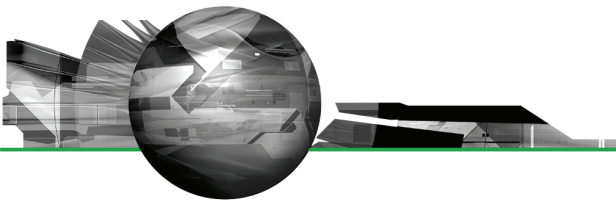Simply select the accessory from the menu to activate it.
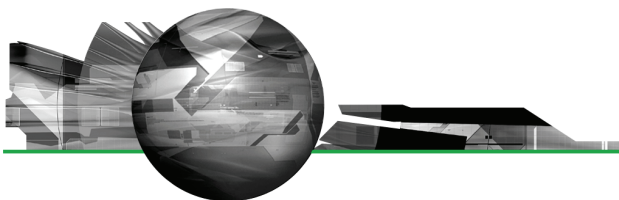
Backward Compatibility

This software is only compatible with the Mastersizer 3000 (MAZ3000) system, and cannot be used with the Mastersizer 2000 (APA2000) system. It is possible, however, to review Mastersizer 2000 results within the Mastersizer 3000 software and also recalculate results. Please refer to the user manuals and software help for guidance as to how this is achieved.

File Types and Locations

The Mastersizer 3000 software uses a series of different file types in order to store data and measurement settings. These are described below, in order to help users who wish to secure the Mastersizer 3000 system using the Microsoft Windows security and access settings.

| File type	Extension	Default path
21CFR11 mode: Audit trails	.xml	C:\ProgramData\Malvern Instruments\Mastersizer 3000\Audit Trails
User sizes	.siz	C:\ProgramData\Malvern Instruments\Mastersizer 3000\User Sizes
User defined materials	.mmat	C:\ProgramData\Malvern Instruments\Mastersizer 3000\Materials
User defined dispersants	.mdis	C:\ProgramData\Malvern Instruments\Mastersizer 3000\Dispersants
Data quality addins	.mdaq	**Shared workspace:** C:\ProgramData\Malvern Instruments\Mastersizer 3000\Workspace\Data Quality Addins **Private workspace:** C:\Users\{user_name}\Documents\Malvern Instruments\Mastersizer 3000\Workspace\Data Quality Addins
Export data	.txt, .csv, .rtf	**Shared workspace:** C:\ProgramData\Malvern Instruments\Mastersizer 3000\Workspace\Export Data **Private workspace:** C:\Users\KBaines\Documents\Malvern Instruments\Mastersizer 3000\Workspace\Export Data
Measurement data	.mmes	**Shared workspace:** C:\ProgramData\Malvern Instruments\Mastersizer 3000\Workspace\Measurement Data **Private workspace:** C:\Users\KBaines\Documents\Malvern Instruments\Mastersizer 3000\Workspace\Measurement Data
Reports	.mrep	**Shared workspace:** C:\ProgramData\Malvern Instruments\Mastersizer 3000\Workspace\Reports **Private workspace** C:\Users\{user_name}\Documents\Malvern Instruments\Mastersizer 3000\Workspace\Reports

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SOP templates	.msot	**Shared workspace:**
		C:\ProgramData\Malvern Instruments\Mastersizer 3000\ Workspace\SOP Template
		Private workspace:
		C:\Users\{user_name}\Documents\Malvern Instruments\Mastersizer 3000\Workspace\SOP Template
SOP	.msop	**Shared workspace:**
		C:\ProgramData\Malvern Instruments\Mastersizer 3000\ Workspace\SOP
		Private workspace:
		C:\Users\{user_name}\Documents\Malvern Instruments\Mastersizer 3000\Workspace\SOP
Data export templates	.mext	**Shared workspace:**
		C:\ProgramData\Malvern Instruments\Mastersizer 3000\ Workspace\Data Template
		Private workspace:
		C:\Users\{user_name}\Documents\Malvern Instruments\Mastersizer 3000\Workspace\Data Template
Various system wide configuration files	Various	C:\ProgramData\Malvern Instruments\Mastersizer 3000

## Changing the destination path for a particular file type

The following workspace folders can be configured from within the Mastersizer 3000 software:

- SOP
- Measurement Data
- Reports
- Export Data

To change the default file location for these files, click on the pencil icon which appears when you hover over the shortcut to the directory with the Workspace viewer:
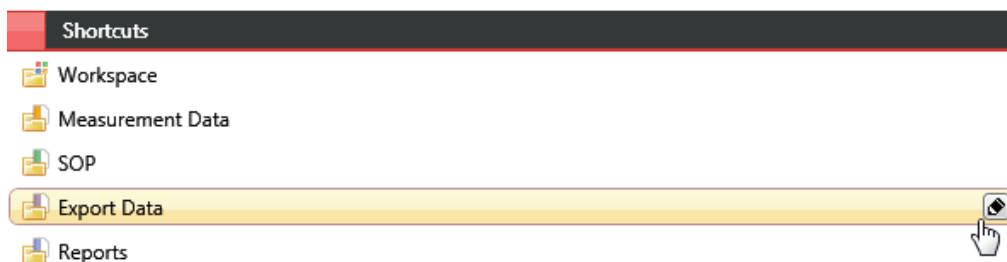
Changing the directory associated with this shortcut will change the default directory accessed by the Mastersizer 3000 software for the selected file type.
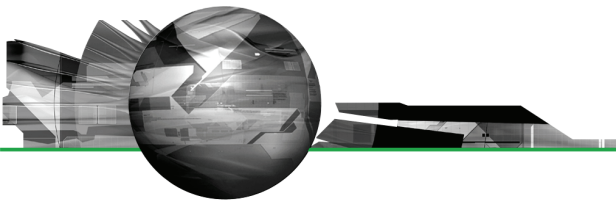
Making a backup of the files

The Mastersizer 3000 software does not create backup copies of any of the file listed above. However, there are third-party software tools that will allow you to schedule regular backups, if required, for each of the file locations.

Why do you no longer use the Program Files folder?

With the introduction of Windows Vista and Windows 7, Microsoft changed the default permissions for the Program Files folder to prohibit software maliciously changing files associated with installed software. All software runs with standard user permissions on Windows Vista/7, even when a user is logged in as an Administrator. By adhering to these default permissions, Malvern's software platforms can execute without additional configuration changes by the end user.