Software Update Notification

PSS0223-04: Mastersizer 3000 v1.11 software

Abstract

This document details the release of software PSS0223-04: version 1.11 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

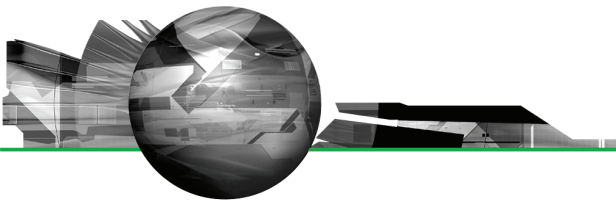The minimum requirements for running this software are highlighted in table 1.

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.

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.

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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 correctly.

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 and run the **setup.exe** file.

Uninstall Procedure

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

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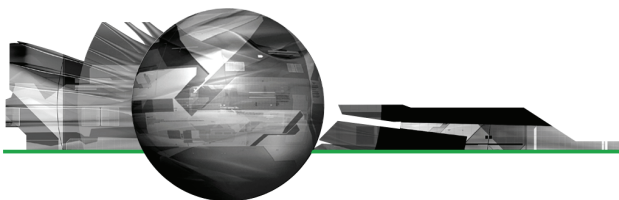
Note: If you wish to install the Mastersizer 3000 software on additional computers, you will need to follow the procedure below for sharing a software licence.

Sharing a licence

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 **accep**t or **decline** the licence.

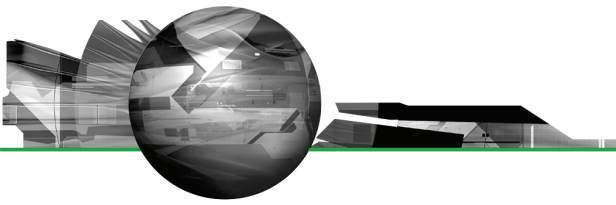Software Update Notification: PSS0223-04

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> **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 who do not own a Mastersizer 3000 system 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
19168		
18335		
18337		
18333	Provide support for system automation using Malvern Link II	Feature implemented
20641		
17717		
16684		
17969	Allow intensity vs. angle data to be exported	Feature implemented
18494	Provide separate de-aeration / degassing option for wet dispersion accessories	Feature implemented
18330	Add a clean button to the accessory control panel	Feature implemented
11081	Add the ability to use a linear x-axis	Feature implemented
19089	Add option to allow a result graph to show the average result for a selected group of records.	Feature implemented
17827	Provide a recently-used SOP list as part of the Workspace viewer.	Feature implemented
10683	Add print settings to an SOP.	Feature implemented
10684	Enable automated data export as part of an SOP.	Feature implemented
19081	Add support for the Hydro SM accessory	Feature implemented

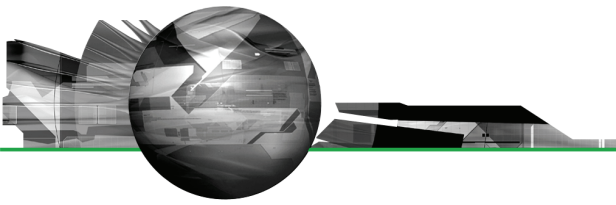Software Update Notification: PSS0223-04

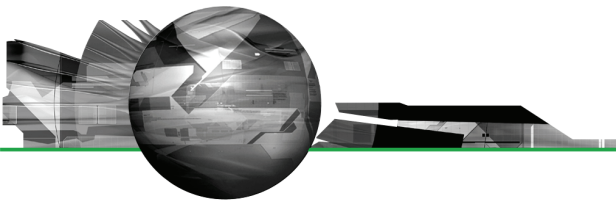|		
18495	Add a degas option to SOPs.	Feature implemented
18515	Allow measurement times of less than 0.5 seconds to be set	Feature implemented
22125		
22124		
22130		
9963	Provide a means of electronically signing records within the application	Features implemented
9966		
17626		
17648		
17649		
9417	Allow Mastersizer 2000 results to be recalculated within the Mastersizer 3000 software.	Feature implemented
22006	Add de-gas option to the pre-measurement sonication option	Feature implemented
21046	Add option to force file saving when a measurement file is closed.	Feature implemented
20491	Add support for the Aero S ceramic venturi units	Feature implemented
20492	Add support for the new automatic lab hopper / tray unit for the Aero S accessory.	Feature implemented
18492	Add result average to SOPs	Feature implemented
15007	Allow multiple measurement files to be selected via the 'Open' menu	Feature implemented

Fixed Issues

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

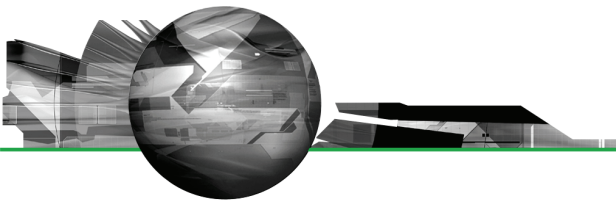| Reference	Issue	Comment
13933	Display units correctly in trend table for percent in/under/over parameters	Fixed
14730	Ultrasound display can indicate that the ultrasound probe is switched on, when it is actually switched off	Fixed
16019	Incorrect column titles within the SOP comparison tool	Fixed

17094	Ultrasound elapsed time increases when accessory stop/abort button pressed.	Fixed
17781	Ultrasound SOP fields stored in a record can be edited following a measurement.	Fixed
18063	Clean sequence for the Hydro EV can sometimes freeze.	Fixed
18967	Measurement settings button can be accessed during manual measurements, causing the software to crash	Fixed
19336	Closing the measurement manager during the calculation of an optical model can cause the software to crash.	Fixed
19812	Measurements continue when the Hydro EV dispersion head is raised	Fixed
19956	The Dv parameter may display the same value in the records view, independent of the arguments supplied.	Fixed
20102	Recent documents list displays measurement files that no longer exist	Fixed
20878	Unable to run SOPs with two accessories of the same type connected to the Mastersizer 3000 systems	Fixed
20637	Stirrer doesn't start during EV SOP measurement	Fixed
22184	Stirrer continues to operate when the measurement manager is closed	Fixed
22446	Venturi and Hopper type are not always being checked for SOP measurements	Fixed
22453	Aero S feed can sometimes start without first achieving the required airflow settings.	Fixed
21558	The analysis settings used when creating a record are correctly but are not recalled when the record is edited.	Fixed
15831	Some Mastersizer 2000 files fail to open in the Mastersizer 3000 software.	Fixed
20046	Frequency plots not correct in ISO mode and display the wrong axis units.	Fixed
16453	Record view column spacing resets when a result is edited.	Fixed
21415	Unable to add new materials with different values for the blue-light optical properties when using the Materials Database window.	Fixed
22248	Aero feed vibration automatically restarts when the previous measurement was not closed down.	Fixed

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Known Issues

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

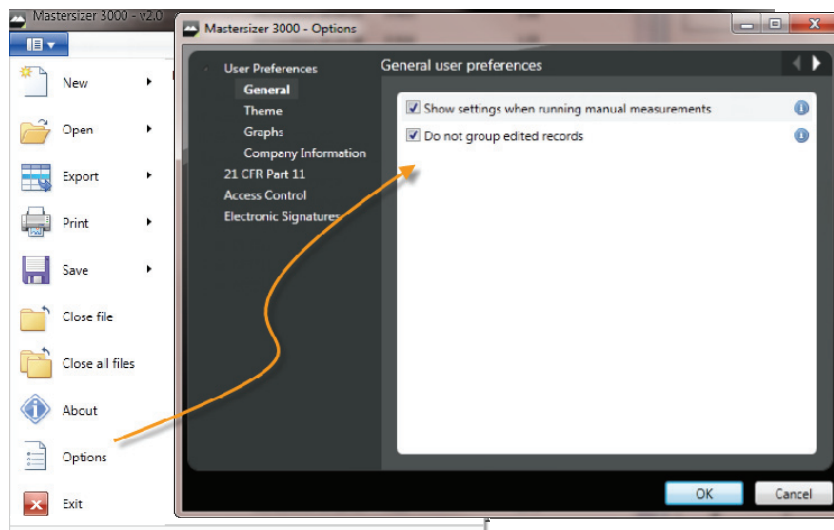| Issue	Work Around	Comment
When graph symbols are displayed in reports, they do not show on printouts.	None available.	Software Bug
The System Audit displays duplicated columns for each language under which the system has been run when auditing has been enabled.	None available.	Software Bug
Loading and saving measurement files on a network is slow.	If local IT policies allow, save files to the local computer.	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

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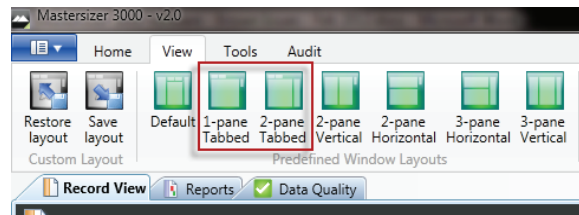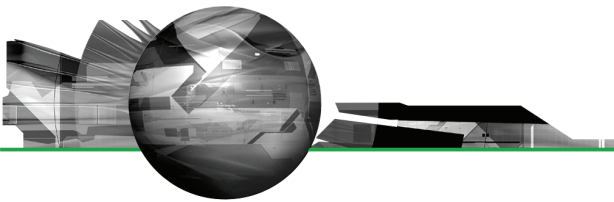
The software does not warn the user when it cannot open a measurement file within the Recently Used list.	This will occur if a file has been moved or deleted. A fix will be provided in a future software release	Software Bug
The beaker / tank indicator in the Accessory Control window for the Hydro accessories occasionally stops updating	None available. A fix will be implemented in a future software release.	Software Bug
Aero S can sometimes fail to achieve the correct sample feed rate during measurements and the clean sequence, causing the measurement to abort.	This will be changed in a future version of software to allow the measurement to continue. The difference between the demanded and actual feed rate will then be reported as a warning message.	Software Bug
The stop button for the stirrer control can be disabled at the end of the tank fill routine even though the stirrer is operating.	To stop the stirrer, click the Start/Play button followed by the Stop button.	Software Bug

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. In the meantime, if crashes are observed, it is recommended that Record Grouping is disabled within the software options:
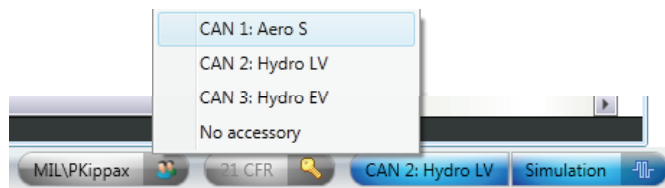

This forces edited version of records to be displayed on a separate row in the records view, in the same way as the Mastersizer 2000 software. In addition, the software may become more stable by docking the Reports tab behind the Records View tab. This can be done by either dragging the Reports tab over 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.
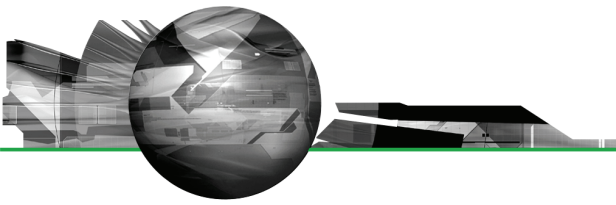
Cleaning-up previous pre-beta versions

If previous pre-beta versions of the software have been in installed on your computer, we recommend that the following steps are used to ensure that the installation completes successfully and all files are up to date:

- Using Windows Explorer Navigate to the shared Malvern Instruments application data folder:

    - **Windows XP:** Normally found in 'C:\Documents and settings\All users\Application Data\Malvern Instruments'

    - **Windows 7:** The folder is normally located in 'C:\ProgramData\Malvern Instruments\'.

- Rename the **Mastersizer 3000** folder to **Mastersizer 3000 BAK**

- Navigate to the Malvern Instruments folder in your private documents folder:

    - **Windows XP:** The folder is normally located in "C:\Documents and settings\{USERNAME}\My Documents\Malvern Instruments"; where *{USERNAME}* is the user account you login to the PC with.

    - **Windows 7:** The folder is normally located in "C:\Users\{USERNAME}\Documents\Malvern Instruments"; where *{USERNAME}* is the user account you login to the PC with.

- Rename the Mastersizer 3000 folder to Mastersizer 3000 BAK.

No files will be deleted or removed by following these steps.

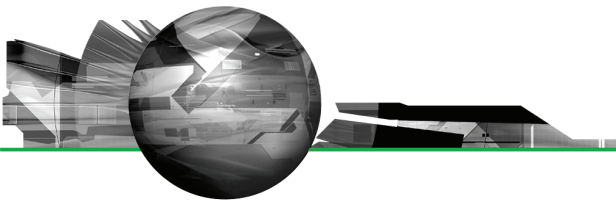Software Update Notification: PSS0223-04

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.

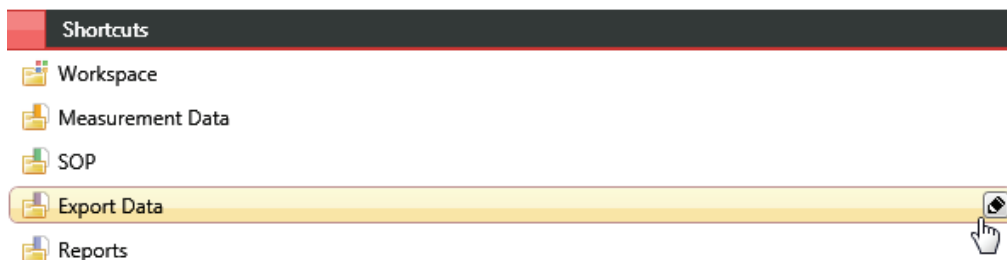| File type	Extension	Default path
21CFR11 mode: Audit trails	.xml	C:\ProgramData\Malvern Instruments\Mastersizer 3000\Audit Trails
User sizes	.siz	C:\ProgramData\Malvern Instruments\Mastersizer 3000\User Sizes
User defined materials	.mmat	C:\ProgramData\Malvern Instruments\Mastersizer 3000\Materials
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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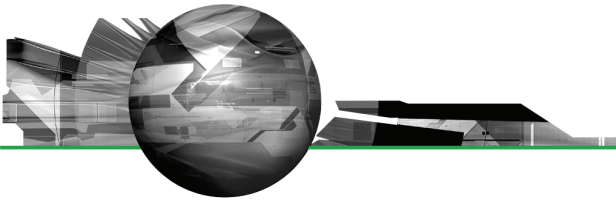|		
SOP templates	.msot	**Shared workspace:**
		C:\ProgramData\Malvern Instruments\Mastersizer 3000\ Workspace\SOP Template
		Private workspace:
		C:\Users\{*user_name*}\Documents\Malvern Instruments\Mastersizer 3000\Workspace\SOP Template
SOP	.msop	**Shared workspace:**
		C:\ProgramData\Malvern Instruments\Mastersizer 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.

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