



Software Update Notification



PSW0060-7.40 (RTSizer v7.40)

Abstract

This document details the release of PSW0060-7.40 RTSizer version 7.40 software for the Insitec process particle sizer; 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

Recommended System Requirements

The recommended requirements for running this software are highlighted in the table below:

Feature	Specification
Processor Type	3GHz Core 2 Duo processor (or equivalent)
Memory	4 GB
Hard Disk Storage	250Gbyte
Additional Storage Media	CD-ROM drive
Display Resolution	1024 x 768
Connectivity	1 RS-232 port
Operating System	Windows XP Professional™ with Service Pack 3 installed Windows 7 Professional (32 and 64 bit)

Although the software has been tested using Windows XP Professional and Windows 7 (64 bit), Windows 7 Professional (32 bit) is preferred, as this operating system was used for software alpha testing.

Note: This software has not been tested for compatibility with Microsoft Windows Vista™



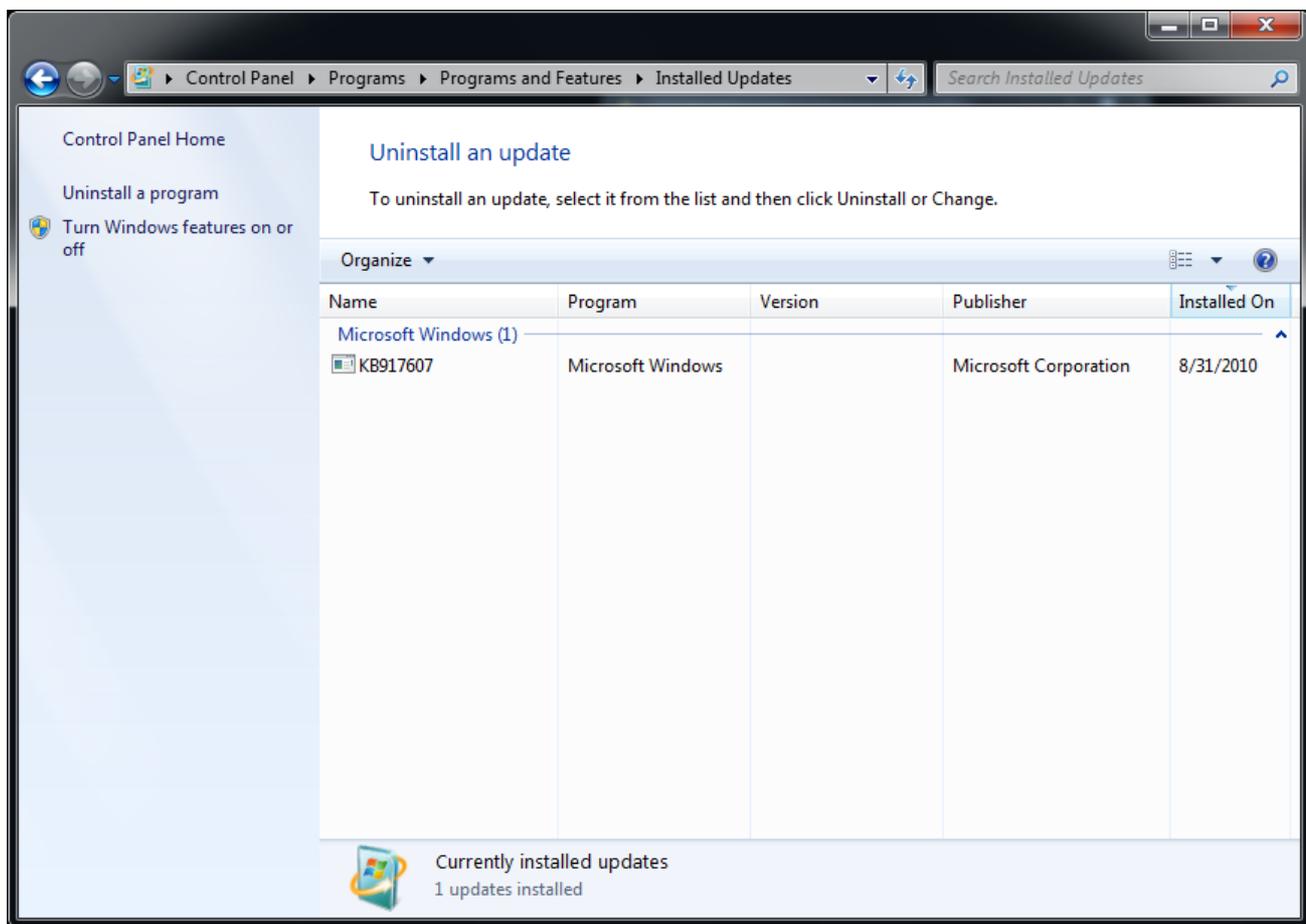
Installation Instructions

Installing the WinHelp component

RTSizer software uses the WinHelp (WinHlp32.exe) component to display the help files with .hlp extensions.

Starting with the release of Windows Vista and Windows Server 2008, Microsoft has decided to no longer include WinHlp32.exe as a component of the Windows operating system.

To use the RTSizer software help files on Windows 7, the WinHelp component may need to be installed. To verify if the WinHelp component is already installed, go to the control panel from Windows start menu and select 'Programs -> Programs and Features' option. Click on the 'View installed updates' link in the left pane to view the installed updates. If the WinHelp component update is already installed on your computer then the entry for **KB917607** will be present in the list as seen below:



Please refer to the Knowledge Base article, "[Windows Help program \(WinHlp32.exe\) is no longer included with Windows](#)" for more information.



To obtain the WinHlp32.exe download for Windows 7, visit the following Microsoft Web site:

<http://go.microsoft.com/fwlink/?LinkId=166421>

There are two different files available for 32 Bit and 64 Bit versions of Windows 7.

Windows 7 (64 Bit)

Windows6.1-KB917607-x64.msu

Windows 7 (32 Bit)

Windows6.1-KB917607-x86.msu

Download and install the appropriate WinHelp component depending upon the operating system being used.

Installing the software

The user must have administrator privileges to install the software. The software will only install on Windows 7 or Windows XP. Windows 7 is the recommended platform. The software is distributed on one CD-ROM.

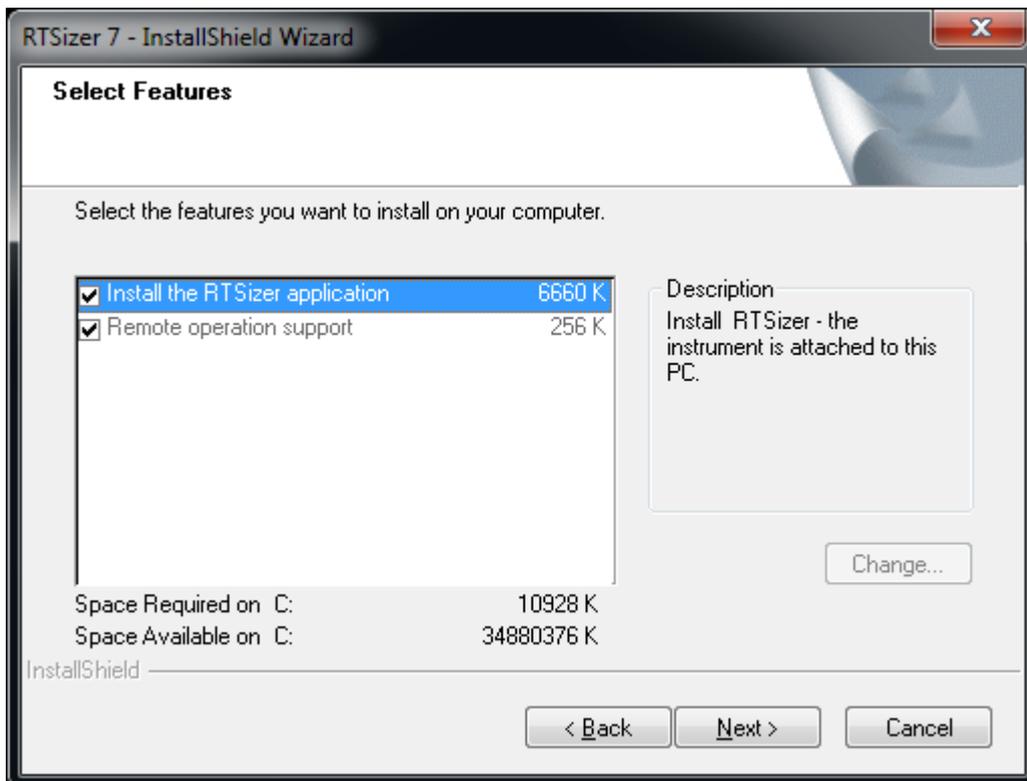
This version is a full version of the RTSizer software; it may be used with Malvern Link v1.31 or later.

The CD should auto-start. If it does not, use Explorer to start the application Start.exe in the root folder of the CD.

If RTSizer v6.00, v7.00, v7.10, v7.11, v7.20 or v7.30 is installed you will be asked to uninstall it first.

RTSizer v7.40 will use any shortcuts and configurations from v7.xx versions of RTSizer

The setup program will ask you the options you want to install, as shown below:





If the Insitec instrument is connected to the PC you are installing the software on then check the 'Install the RTSizer application' option. If the instrument is attached to another PC on the network (and RTSizer is installed on that PC) and you are going to install Malvern Link on this PC then clear the 'Install the RTSizer application' option and check the 'Remote operation support' option.

The last page of the setup program gives you the option of starting RTSizer to make an instrument configuration. If you do not choose this option you can make a configuration by choosing Start->Programs->Malvern Instruments->RTSizer->Configuration Manager. In the Configuration Manager main window type in a configuration name, a description, your company name and then choose the serial communications port for the instrument. You can also choose if you want the login dialog box to appear every time RTSizer is started. Click OK, the main RTSizer window will open and attempt to connect to the instrument.

The configuration manager will create a shortcut on your desktop, which you can then use to start RTSizer.

Uninstall Procedure

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

Using the New Features in RTSizer v7.40

Setting the rolling average period remotely

The **SetAveragePeriod** RTSizer7X command is a new command for setting the rolling average period (in seconds) in the software.

SetAveragePeriod

Set the rolling average period for the PSD measurement.

Syntax

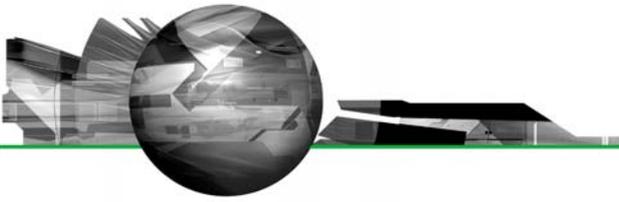
```
Function SetAveragePeriod(nDuration As Short) As Short
```

Parameter	Description
nDuration	The rolling average period value in seconds.

Returns

- 1 = Rolling average period value is set
- 0 = Failed to set the rolling average period
- -1 = Not Connected
- -2 = Connection timed-out
- -3 = Value can not be set during the active PSD measurement
- -4 = Security failure - No measurement permission or TakeControl not issued

Remarks



To view a graph of the averaged data values on the Time History Display, select the Average size and transmission view. The average period specified is the number of seconds over which the data is averaged.

The rolling average period can not be set if the PSD measurement is active.

TakeControl command **must** be issued before this command is used.

Fixed Issues

The following Software Change Requests (SCRs) have been implemented in this version of the RTSizer software

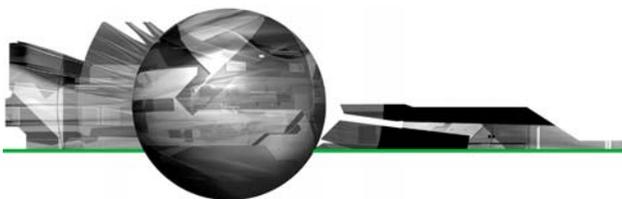
SCR Number	Description	Improvement or Fix
8058	Make changes for Windows 7 compatibility	Implemented
9282	A standard user cannot load a .psh file created by an administrative user	Fixed
9349	Error message during start up phase with multiple sessions of RTSizer	Fixed
9350	Add a new RTSizerX method for changing the rolling averaging period	Implemented
9385	Restriction on change to PCV variables should not be so restrictive	Fixed

Known Issues

Windows 7 Firewall Settings

Windows 7 contains a new firewall system which is designed to prevent applications from accessing the remote communication functionality used by the RTSizer software. As such, when the RTSizer software is first run, a security alert message box will appear informing you that operation of the software has been blocked:





In order to enable operation of the software, you need to be logged on as an administrator. Tick the first checkbox (**Private networks**) within the alert dialog and deselect the second checkbox (**Public networks**). Then press the **Allow access** button.

Files created by using export functionality do not support additional measurements

If a range of records are exported to a new file using the menu command File->Export and saved as a data file then the Database size for the new file is 0 bytes. This means that if a measurement is subsequently started in the file then the software will flash a message saying "PSH file is full" and begin deleting some exported records.

The solution to this problem is to set the size of the Database (via Edit->Database...) for the file to a reasonable size e.g. 250MB **before** carrying out any measurements.

Using RTSizer Help on Windows 7

The RTSizer help will not be available to the users on Windows 7 if the WinHelp component update is not installed. The error message 'Failed to launch help' will be displayed if the user tries to browse through the RTSizer help.

The Installation Instructions section describes the WinHelp component installation procedure. After installing the update it should be possible to browse through the RTSizer software help.

Restart after configuration change

If the configuration is changed from the system parameter window then it may be necessary to close and re-start RTSizer before the changes take effect.

Saving particle size history files

It is not advisable to save data directly to a network drive as network traffic may delay file writes causing measurements to be suspended. If the measurement period is longer than one measurement per second then it should be safe to save on a network drive.

Note that the RTSizerX commands that have a PSH filename as a parameter assume the file is in the default data directory (e.g. 'C:\Users\Public\Documents\Malvern Instruments\RTSizer\Data' on Windows 7 OR 'C:\Documents and Settings\All Users\Documents\Malvern Instruments\RTSizer\Data' on Windows XP)

Fast measurement

Measurements made with a 0.25 millisecond update rate may very occasionally have records with a 'Zero scan count' error. Using a fast PC with no other running programs seems to reduce the problem. If you need to transfer data using RTSizer7X use the 'async' commands to read PSH data after the measurement has been completed.

Running RTSizer on laptop computers

Experience at Malvern Instruments has shown that running RTSizer on laptop computers may cause reliability problems in communications between the computer and the optical head. If you get problems of random disconnection and connection messages in the RTSizer message window try disabling the power saving features on the laptop computer. If this does not work we have found that using a USB to serial converter in place of a direct serial connection often solves the problem.

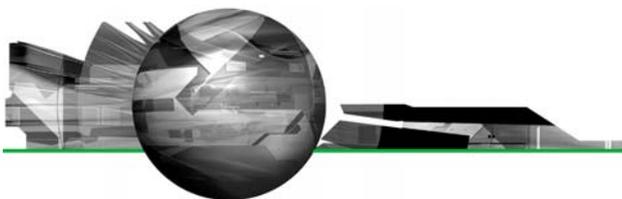
New File Locations

Version 7.40 like 7.30 uses new locations for many files. Upgrading from an earlier version of RTSizer will move any existing files to the new locations:

In the table below:

<common data> refers to the common settings folder.

For Windows 7 this is typically 'C:\ProgramData\Malvern Instruments\RTSizer' and



for Windows XP this is 'C:\Documents and Settings\All Users\Application Data\Malvern Instruments\RTSizer'.

Note that the 'C:\ProgramData' or 'C:\Documents and Settings\All Users\Application Data' folder is normally hidden from Windows Explorer.

<shared docs> refers to the shared documents folder.

For Windows 7 this is typically 'C:\Users\Public\Documents\Malvern Instruments\RTSizer' and

for Windows XP this is typically 'C:\Documents and Settings\All Users\Documents\Malvern Instruments\RTSizer'

<program files> refers to the root folder where the program is installed.

For Windows 7 and Windows XP this is typically 'C:\Program Files\Malvern Instruments\RTSizer'

File	Old location	New location
RTSizer_2000.ini Main settings file	Windows	<common data>
DefaultPrinter.rtp Default printer settings	<program files>\Program	<common data>
Security.cfg Security settings	<program files>\Data	<common data>
Current.exp Current File export settings	<program files>	<common data>
RefractiveIndex.ini New particle and dispersants settings	<program files>\Configuration	<common data>
Configurations Folders containing configuration data	<program files>\Setup	<common data>\Setup
Scattering Matrices Files of scattering models	<program files>\Configuration\Scattering Matrices	<common data>\Configuration\Scattering Matrices
Imaging Models Files of imaging properties	<program files>\Configuration\Imaging Properties	<common data>\Configuration\Imaging Properties

All of the above files and folders are automatically copied to their new locations during the installation.

Other files created by RTSizer – by default – will have new locations. These are only suggestions and the files may be saved in different locations by changing the settings within RTSizer. The files are not automatically moved to the new locations.



Folder	Old location	Suggested New location
Data Measurement data	<program files>\Data	<shared docs>\Data
Acrobat Results PDF files	<program files>\Acrobat Results	<shared docs>\Acrobat Results
Backup Backup of measurement files before editing	<program files>\Backup	<shared docs>\Backup
Audit Trails Audit trail data	<program files>\Audit Trails	<shared docs>\ Audit Trails

Windows Security Issues

The RTSizer software must be installed by a user who is a member of the Windows Administrators group but any user should be able to run the RTSizer software

Settings and data files have now been moved to locations where any user should be able to read and write to them.

Language Switcher and Windows Locale

The Language Switcher program will only change the language settings of RTSizer if the Windows locale settings are not set to the selected language.

For example if the PC is running English-language Windows XP and you want to run RTSizer with a French-language user interface then the Windows locale setting (Start->Control Panel->Regional Options->General) must NOT be "French (France)"

Optimum Screen Display

RTSizer has been optimised to look best with a screen resolution of 1024 x 768 with 16, or higher, bits of colour and with Windows normal small fonts.

Memory Leak on Windows XP SP2

Opening and closing measurement file windows many times leads to a small GDI (graphics memory) leak. This is an issue with Windows XP SP2 but generally will only become a problem if running continuous automated sequences of measurements over several days. The current solution is to run Windows with the 'Classic' theme.