

Support / Software / VectorPro
Support / Software / VectorPro / VectorPro test software
Support / Product / OmniTest

Revision ID

12075

Manual | 431-955

1 Introduction and Initial Setup



Mecmesin
testing to perfection

431-955

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2 Introduction

VectorPro™, **VectorPro™ MT** and **VectorPro™ Lite** are all registered trademarks of Mecmesin Ltd.

VectorPro is a dedicated software solution used for the programming and acquisition of data from a range of Mecmesin test stands and instruments.

The software enables users to capture data from Mecmesin test stands and instruments, perform calculations and export/report calculations and test data. In addition, VectorPro can provide secure audit trails and user management systems. Operation sequences can be constructed by intuitive drag-and-drop control, with test editing including versioning control for full traceability. The test attributes system can be used to store information such as lists, notes and images.

2.1 User Manual Icons

Throughout this manual, the icons shown below are used to identify important health and safety information as well as additional installation/operation guidance. Do not proceed until each individual message is read and thoroughly understood.

2.1.1 Warning

The **warning** icon highlights a situation or condition that may lead to possible personal injury or damage to the associated equipment.

2.1.2 Caution

The **caution** icon indicates a situation or condition that could cause the equipment to malfunction leading to possible damage.

2.1.3 Information

The **information** icon indicates additional or supplementary information about the action, activity or application.

2.2 User Guidance

This user manual covers the initial installation and setup of VectorPro only, for further guidance relating to other aspects of VectorPro please refer to one of the documents listed below.

Please Note: It is recommended to work through all available user manuals, starting at the top of the list below and finishing at the bottom. Where necessary skip user manuals that do not apply to your test stand. For more information relating to test stand device groups please refer to the '**Device Groups**' section of this user manual.

Important! It is advised that this introductory document is read in full before continuing to other user manuals.

2.2.1 VectorPro™ User Manuals

Click one of the links below to navigate to the applicable user manual.

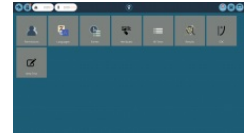


Introduction and Initial Setup (Current Document)

Covers the initial setup and installation of VectorPro, as well as the basics of the software functionality and user manuals.

Workspace and User Management

Runs through the functionality of the VectorPro Workspace, as well as admin tasks such as User Management and the Event Viewer.

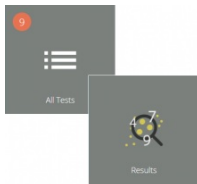


Designing a Test MT Version

A detailed guide to designing a test for VectorPro MT compliant test systems.

Designing a Test Lite Version

Covers designing a test for VectorPro Lite compliant test stands and devices

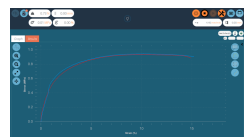


All Tests Viewer and Results Viewer

A guide explaining the functionality of the All Tests Viewer and Results Viewer.

Running a Test, Reporting and Exporting

How to run a test in VectorPro, as well as user guidance covering the Reporting and Exporting of data from VectorPro.



System Deflection Compensation MT Systems Only

Cover configuring System Deflection Compensation (SDC) within VectorPro. SDC is only available with MT compliant test systems.

Software License Agreement

View the latest version of the Mecmesin VectorPro Software License Agreement.

Mecmesin Software Licence Agreement
Date: 1st November 2015
Version:
1. Mecmesin Limited, a company incorporated in England (Registration Number 01552070) having its registered office at Hadden House, Spring Cottage Business Park, St-402, Alton Towers, Nr-10
2. The Licensor, for itself, its agents or its assignees the agreement and conditions contained in this Software Licence Agreement
1. Definitions
1.1. In this agreement:
Agreement means this agreement including any amendments to this Agreement from time to time
Effective Date means the date of execution of this Agreement
Documentation means the documentation for the Software provided by the Licensor and information or advice available to the Licensee from the Licensor
Software means the software identified in Schedule 1 and any other software needed or required by the Licensee which runs on either a computer or mobile device, and also the Firmware that runs on hardware manufactured by the Licensor
Firmware means the software embedded on any hardware manufactured by the Licensor
Software Defect means a defect, error or bug in the Software or Firmware having an adverse

Is it advised that this introductory document is read in full before continuing to other user guides!

1 Introduction and Initial Setup

2 Introduction

- 2.1 User Manual Icons
 - 2.1.1 Warning
 - 2.1.2 Caution
 - 2.1.3 Information
- 2.2 User Guidance
 - 2.2.1 VectorPro™ User Manuals

3 Device Groups

- 3.1 Contextual help
- 3.2 VectorPro™ MT - Materials Test Stands
- 3.3 VectorPro™ Lite - Motorised Test Stands
- 3.4 VectorPro™ Lite - Portable Instruments

4 System Requirements

5 Installing VectorPro™

- 5.1 Installing VectorPro™ (Clean install)
- 5.2 Important Installation Information

6 Connecting a Mecmesin device

- 6.1 USB Test Stands
 - 6.1.1 Driver Information
- 6.2 RS232 Instruments
 - 6.2.1 RS232 Instruments Driver Information
 - 6.2.2 RS232 Instruments Communication Settings

7 Launching VectorPro™

- 7.1 Database Upgrade

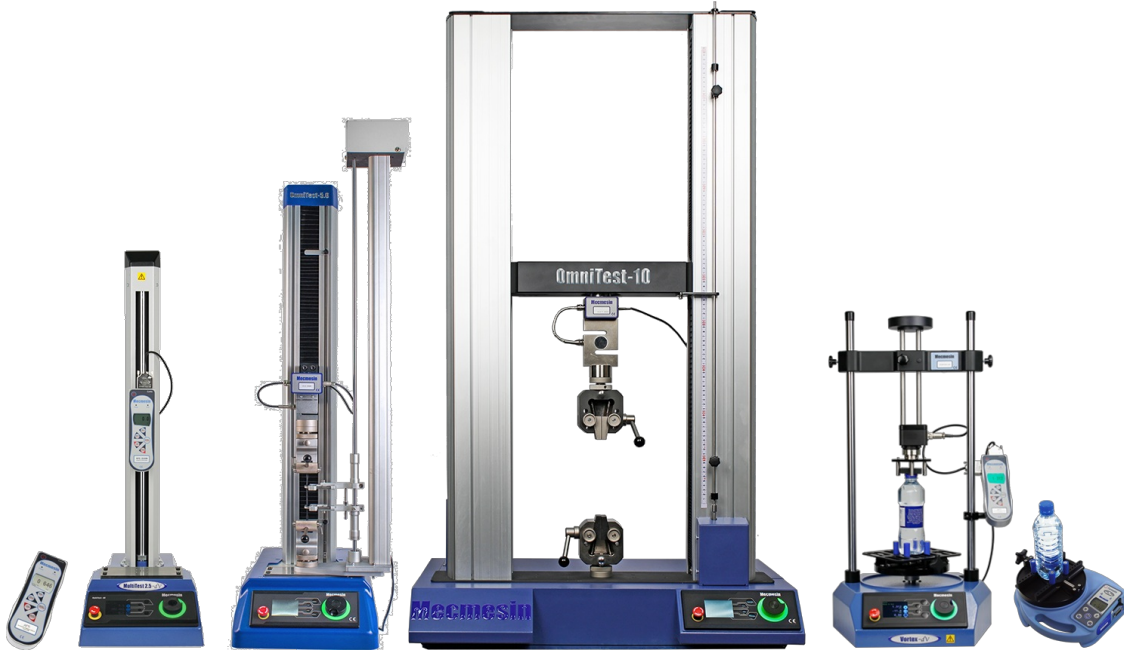
8 Further Information

3 Device Groups

This manual covers the use of VectorPro with all compatible Mecmesin devices, although some sections are only relevant to specific instruments. To improve the accessibility of this document, all compatible Mecmesin devices have been placed into three groups. This is detailed further in the following sections '**VectorPro™ MT - Materials Test Stands**', '**VectorPro™ Lite - Motorised Test Stands**' and '**VectorPro™ Lite - Portable Instruments**'. Software features associated with these device groups are split into two further categories:

- **VectorPro MT (Material Test)** - This contains advanced calculations and operation functions. MT devices support high precision ELS and extensometry devices. Compatible with material test stands.
- **VectorPro Lite** - This contains standard calculations and operation functions. Compatible with motorised test stands and instruments.

Sections relevant to only specific device groups are denoted at the start of the section and can be skipped if they aren't relevant to the test stand or instrument being used.



Some of the test stands and instruments compatible with VectorPro.

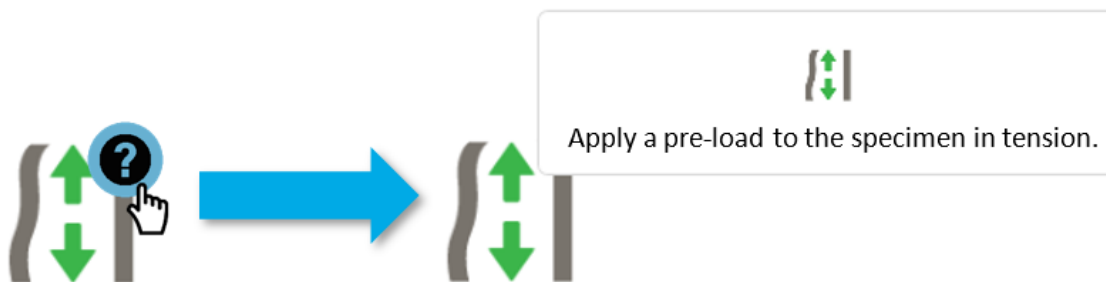
3.1 Contextual help



The symbol displayed left, is seen within VectorPro in many places, such as operations and test settings.

Clicking the contextual help symbol displays help text and images to explain the setting or operation function.

In the example below clicking the **Contextual Help** icon displays a pop-up detailing the operation's function.



3.2 VectorPro™ MT - Materials Test Stands



From left to right, MultiTest-dV with dV(u) mode enabled, OmniTest-5.0 kN single column test stand and OmniTest-10 kN twin column test stand.

Materials test stands are designed to perform a range of materials testing procedures, as well as some product test applications.

The range of rigid test frames enables the properties of metals, plastics, polymers, alloys, composites, wood, fabrics, glass, laminates and ceramics to be accurately tested in tension and compression with forces up to 50 kN (11,240 lbf).

3.3 VectorPro™ Lite - Motorised Test Stands



From left to right, MultiTest-dV 0.5 kN, MultiTest-dV 1.0 kN, MultiTest-dV 2.5 kN and Vortex-dV test stands.

Mecmesin motorised test stands are designed for a wide range of applications and are available in both force and torque variants.

The MultiTest-dV range integrates with the Mecmesin AFG, a versatile and fully-featured digital force gauge, available in 10 load capacities from 2.5 N to 2.5 kN. Stand capacities include 0.5 kN, 1.0 kN and 2.5 kN variants.

The Vortex-dV integrates with the Mecmesin AFTI and is a versatile torque testing system, comprising of a precision-controlled motorised stand with a choice of torque transducers; 1.5 N.m, 3 N.m, 6 N.m and 10 N.m.

3.4 VectorPro™ Lite - Portable Instruments



From left to right, AFTI with torque screwdriver, AFG 500N, Tornado closure torque tester and Orbis closure torque tester.

Mecmesin portable instruments are designed for manual operation and in conjunction with VectorPro can be used to capture force and torque readings.

Advanced Force Gauges (AFG) are available in 10 models from 2.5N to 2500N capacity. Both AFG and Advanced Force/Torque Indicator (AFTI) devices are also compatible with Mecmesin external Smart force and torque transducers for increased flexibility.

Tornado and Orbis torque testers are versatile instruments for manually measuring low-level torque up to 10 N.m (Orbis limited to 6 N.m). They provide practical operation, combined with advanced features for easy and accurate testing of clockwise and counter-clockwise torques.

4 System Requirements

Windows 10 and 11 are supported only in 64-bit architecture forms. It is recommended for an optimal experience that VectorPro is run on Windows 10-64 bit.

The recommended specification is listed below:

- Intel Core i7 processor (or equivalent)
- 16GB RAM
- At least one free USB 2.0 or USB 3.0 port
- Solid State Disk (SSD) with 10GB free space
- Screen resolution 1920x1080 (Full HD)
- Windows 10 64-bit

Please Note: for the best possible user experience, when running VectorPro, it is encouraged that the computer used meets or exceeds the recommended specification.

5 Installing VectorPro™

If VectorPro is installed on the PC it is recommended to backup any existing database before updating the software. The default save location is:

- C:\ProgramData\Mecmesin\

Copy the entire **VectorPro** folder to a safe location.

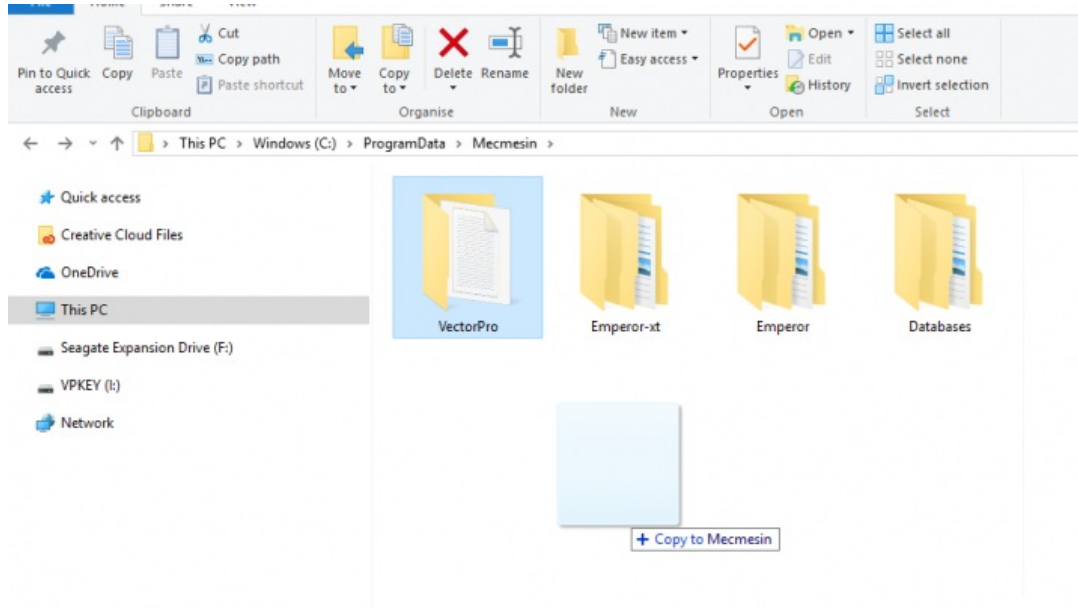
If a database is being used in a custom location or, if a database folder has been renamed from the default **VectorPro**, then this folder should also be backed up. It is important to ensure there are no spaces in the address of the custom save location before updating. In some instances, spaces in the location address can stop the software from updating the database. For example:

- C:\Users\Mark\Documents\Test Files\

Is not an acceptable save location as it contains a space in the address between the words **Test**' and **Files**'.

- C:\Users\Mark\Documents\TestFiles\

The address above is acceptable as there are no spaces



Copying the default database to create a backup. This is recommended before installing a new version of VectorPro.

5.1 Installing VectorPro™ (Clean install)

The installation software is supplied on a USB key. In some instances, it may be supplied via an online download. This download should be copied to a location from where it can be run on the PC required. Please do not connect the test equipment until the installation has been completed.

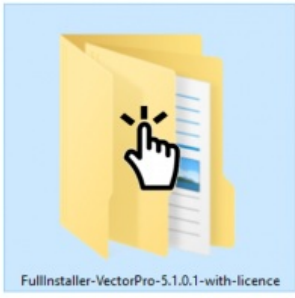
Step 1

Check the PC Specification

Before installing VectorPro check whether the selected PC is 64-bit or 32-bit. If unsure of the architecture of the computer, contact the local IT administrator for help.

Step 2

Locate the Installation Folder



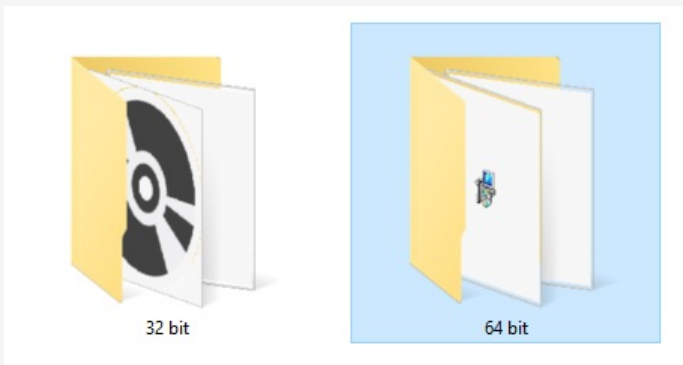
Insert the VectorPro key into the PC and locate the installation folder called:

- FullInstaller-VectorPro-X.X.X.0-with-licence.

(Where 'X' denotes Product, Build, and Revision number)

Step 3

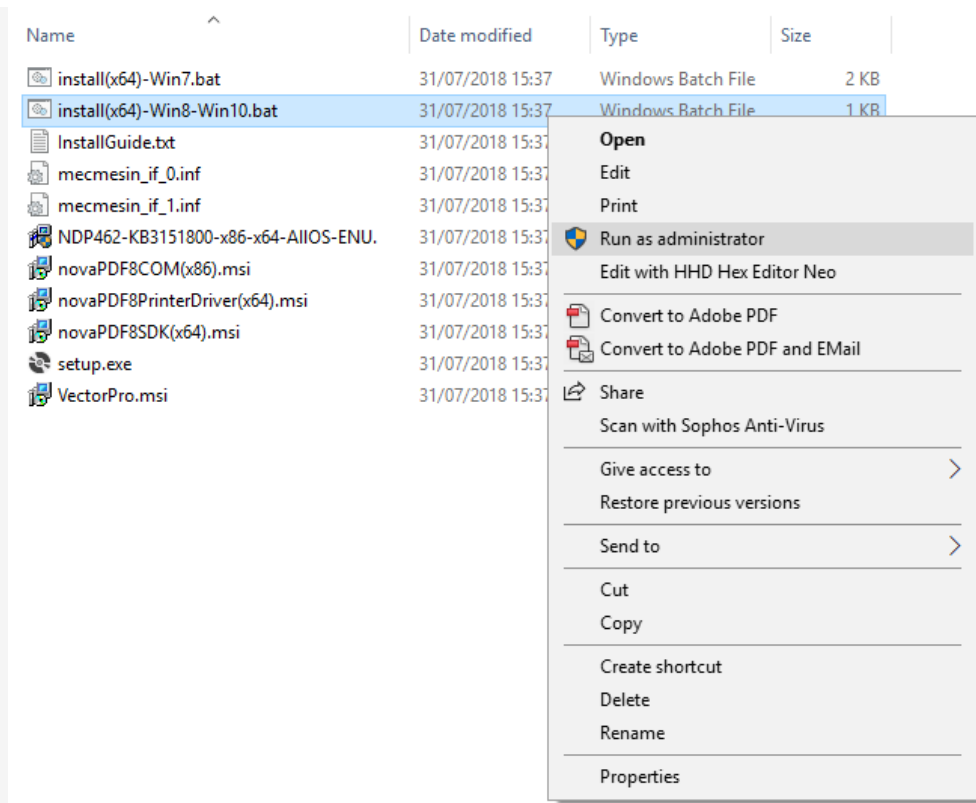
Start the Installer



First, select either the 32-bit or 64-bit folder depending on the computer's architecture. Within this folder there are the following files:

| Name | Date modified | Type | Size |
|------------------------------------|------------------|-----------------------|-----------|
| install(x64)-Win7.bat | 31/07/2018 15:37 | Windows Batch File | 2 KB |
| install(x64)-Win8-Win10.bat | 31/07/2018 15:37 | Windows Batch File | 1 KB |
| InstallGuide.txt | 31/07/2018 15:37 | Text Document | 1 KB |
| mecmesin_if_0.inf | 31/07/2018 15:37 | Setup Information | 2 KB |
| mecmesin_if_1.inf | 31/07/2018 15:37 | Setup Information | 2 KB |
| NDP462-KB3151800-x86-x64-AIOS-ENU. | 31/07/2018 15:37 | Application | 60,555 KB |
| novaPDF8COM(x86).msi | 31/07/2018 15:37 | Windows Installer ... | 1,160 KB |
| novaPDF8PrinterDriver(x64).msi | 31/07/2018 15:37 | Windows Installer ... | 19,060 KB |
| novaPDF8SDK(x64).msi | 31/07/2018 15:37 | Windows Installer ... | 6,660 KB |
| setup.exe | 31/07/2018 15:37 | Application | 531 KB |
| VectorPro.msi | 31/07/2018 15:37 | Windows Installer ... | 15,250 KB |

The files shown on the previous page are for a 64-bit installation. The 32-bit version file names differ.

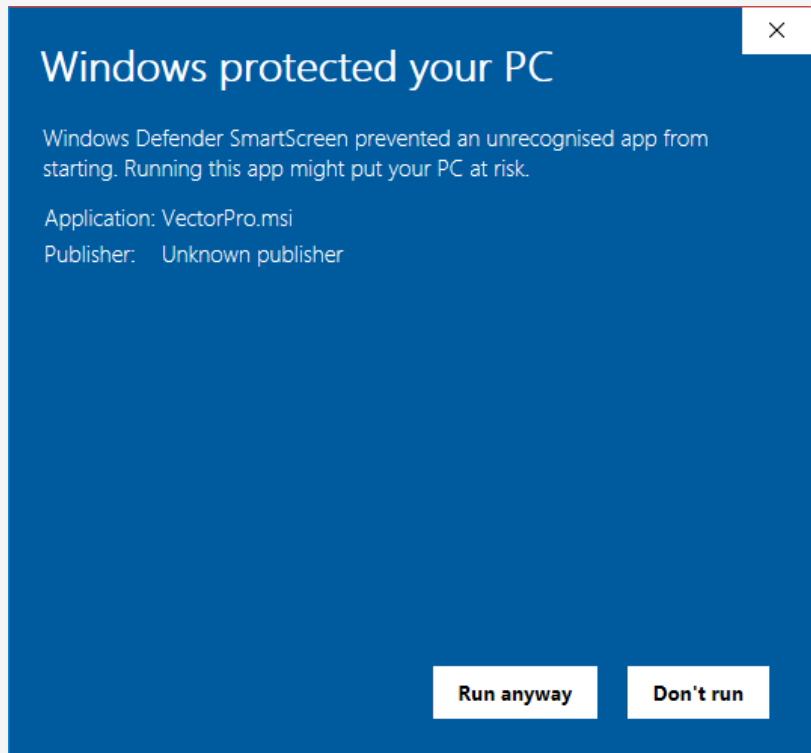


Right-click on the appropriate '.bat' file and select **Run as administrator**'. Windows 7 users should use the '**install(x64)-Win7.bat**' and users running Windows 8/10 should use the **install(x64)-Win8-Win10.bat**'

Step 4

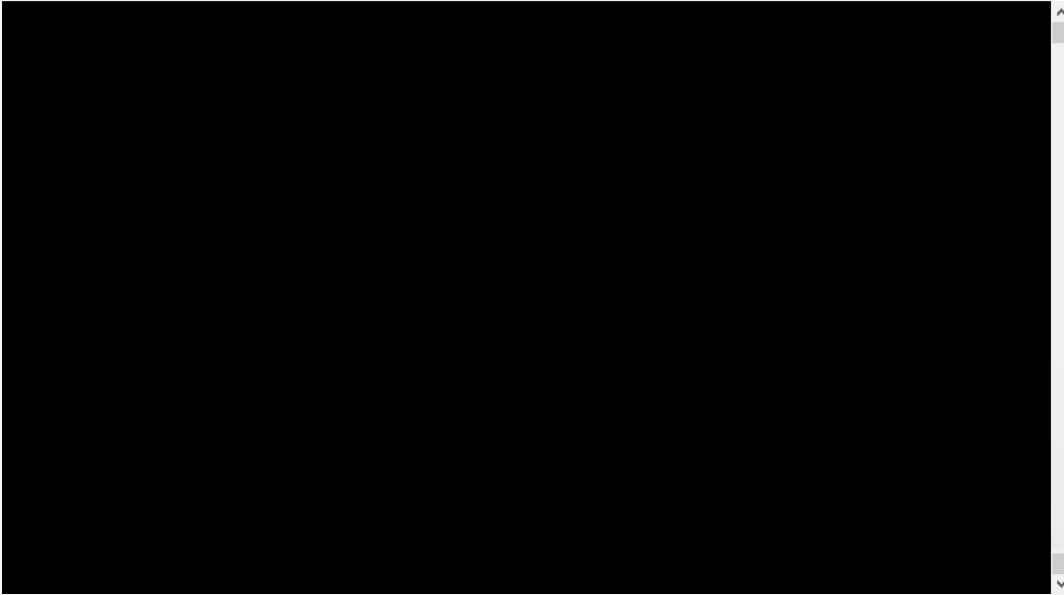
Installing VectorPro™

In some instances, Windows Defender* may prevent the installer from running and the screen below is presented, please select '**More information**' and then the **Run anyway**' option.



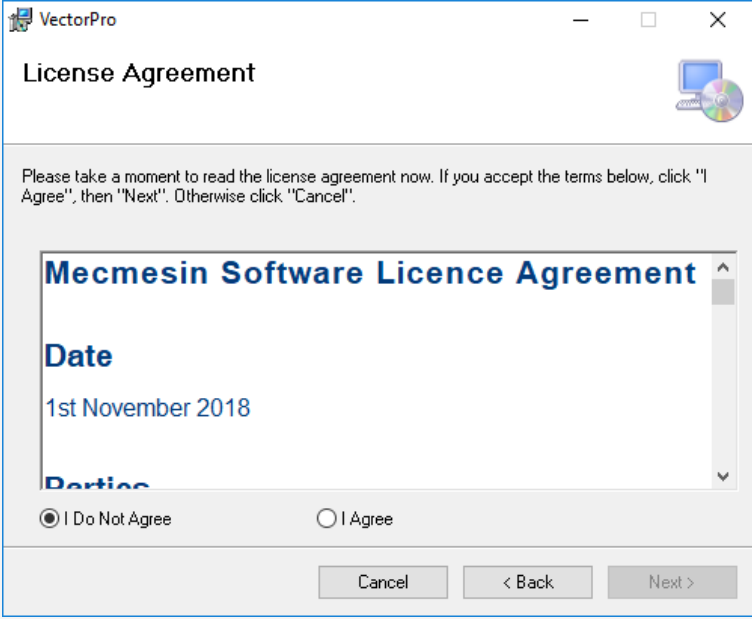
**Windows Defender is a trademark of Microsoft Corporation.*

A black command prompt window should now appear onscreen (Shown Below). This manages the installation of the VectorPro associated drivers and PDF printing software.

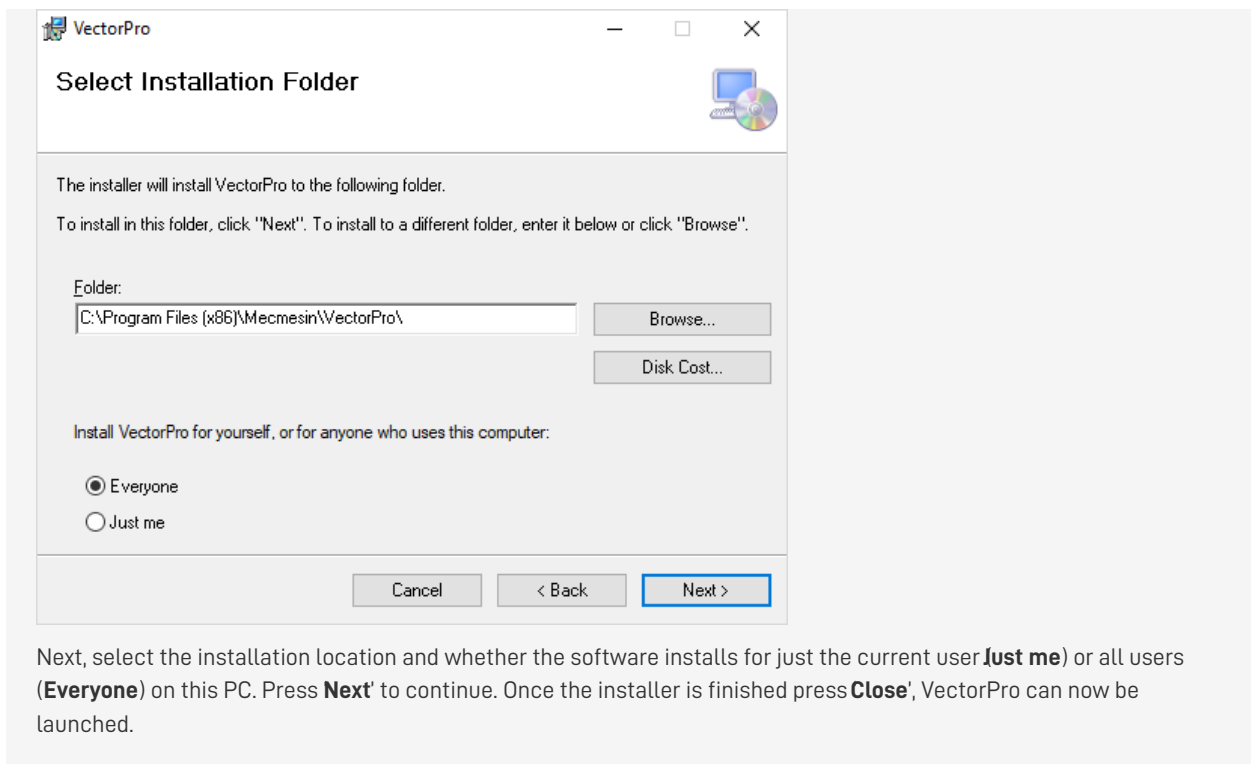


Once the installation of the associated drivers is completed, the main VectorPro setup installer will launch.

Before continuing the installation it is important that the software license agreement is read and understood in full; failure to **'Agree'** will terminate the installation of the software. This document is also available to view here -[Software License Agreement](#).



To continue, press the **'Next'** button. The window on the next page is then displayed.



5.2 Important Installation Information

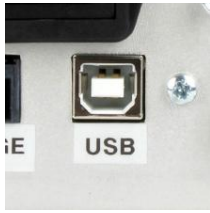
Please ensure that all Windows user accounts that launch VectorPro has Admin **Full Control** access to the following locations:

- **Default database location:** C:\ProgramData\Mecmesin\VectorPro\
- **Default install location (Windows 10 example):** C:\Program Files (x86)\Mecmesin\VectorPro\
- **Custom database location:** If a custom database location is used, users must also have admin access within Windows for this location

If unsure how to perform this please contact the local IT department for assistance.

6 Connecting a Mecmesin device

6.1 USB Test Stands



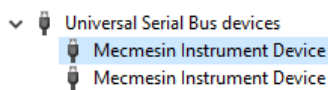
The following devices connect via USB-B to USB-A communications cable - Part No. 351-093:

- OmniTest material test stands,
- MultiTest-*dV*, including *dV(u)* mode,
- Vortex-*dV* motorised torque test stand.

To connect and use VectorPro, firstly connect the device to a PC using a USB-B to USB-A cable. Switch on the test stand and open VectorPro, the device is shown as connected on the USB connection icon (located at the top left of the software screen).

For more information relating to USB connected test stands please refer to the **VectorPro Header Bar Features** section located in the Workspace and User Management User Manual

6.1.1 Driver Information



If the test stand does not show as connected open Windows **Device Manager** to ensure that the correct driver is installed. Under **'Universal Serial Bus devices'**, two items called **'Mecmesin Instrument Device'** should be displayed, as shown in the image above.

If these are not present, please contact the local IT administrator or Mecmesin agent.

6.2 RS232 Instruments

The following Mecmesin gauges and instruments connect via D-Sub RS232 to USB-A communications cable, the cable part numbers are listed next to the compatible instruments below:

- **AFG/AFTI** - Cable Part No. 351-086,
- **BFG** - Cable Part No. 351-087,
- **CFG+** - Please consult the local Mecmesin agent for the required information,
- **Orbis** - Cable Part No. 351-086,
- **Tornado** - Cable Part No. 351-086.

To connect the device, plug the USB to RS232 cable into the PC's USB port and the device's RS232 communication port.

Ensure that the gauge RS232 settings are configured correctly, for more information consult the relevant gauge user manual.

Switch on the device and open VectorPro.

Please Note: RS232 devices are not shown as connected or listed in the top left corner of VectorPro.

6.2.1 RS232 Instruments Driver Information

In most instances, driver installation is handled within Windows automatically but if the device does not connect to VectorPro the driver can be manually installed.

The driver installer is available as an executable from the following link:

- http://www.ftdichip.com/Drivers/CDM/CDM21228_Setup.zip

If the link is unavailable please contact the local Mecmesin support agent for assistance.

6.2.2 RS232 Instruments Communication Settings

To achieve communication between an RS232 instrument and VectorPro the correct settings must be applied within the devices communication menu. The device should be configured as followed:

- **TX Units** is set to 'On',
- **TX Sign** is set to 'On',
- **Baud Rate** is set to '115200',
- **CR LF** is selected,
- **Line Delay** is set to '0',
- **RS232** transmission is selected,

For help setting the device communication settings please consult the relevant device's operating manual:

- **431-262** Orbis Digital Torque Tester, Operating Manual
- **431-261** Tornado Digital Torque Tester, Operating Manual
- **431-213** Advanced Force Gauge (AFG Mk4) Operating Manual

7 Launching VectorPro™

The login dialogue for VectorPro is pictured below. The version number is displayed under the VectorPro title.



This window consists of the following elements:



Enter the username and password, then click to open VectorPro.
The default password for user '**admin**' is '**admin**'. Passwords are case sensitive.



Click to exit VectorPro.



In the event of completely lost administrative access, Mecmesin Technical Support can unlock the system.
Contact – support@mecmesin.com

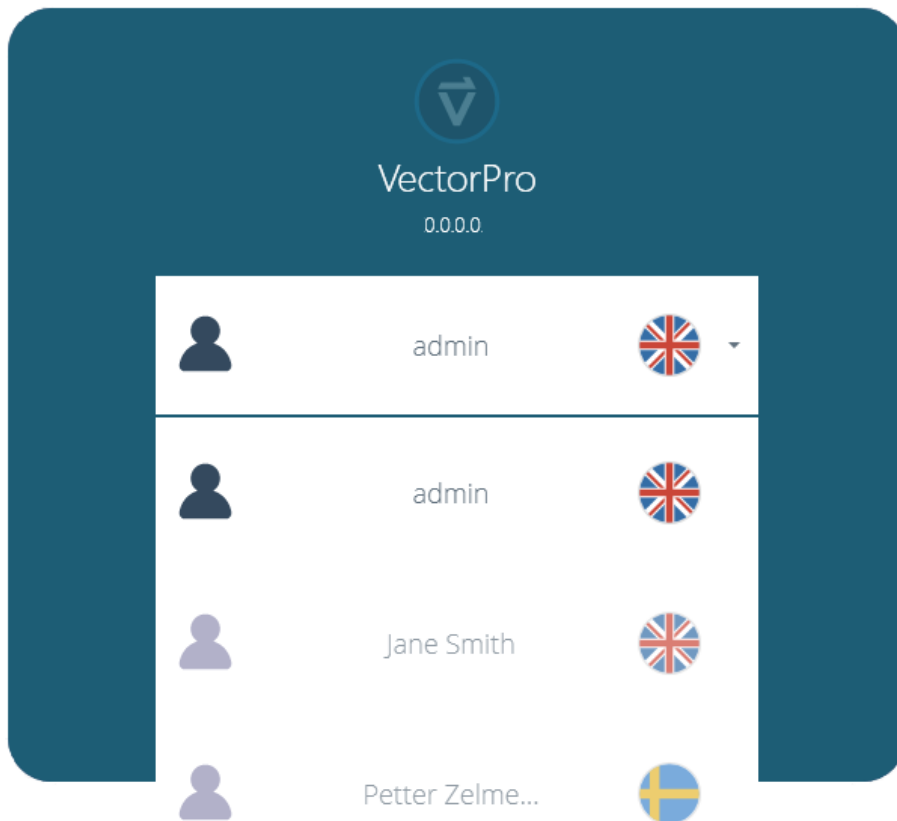


After entering the password, click to select a different database for tests and results (for example, imported from another test location or office). Available only to administrator login. After selection, continue with normal login.



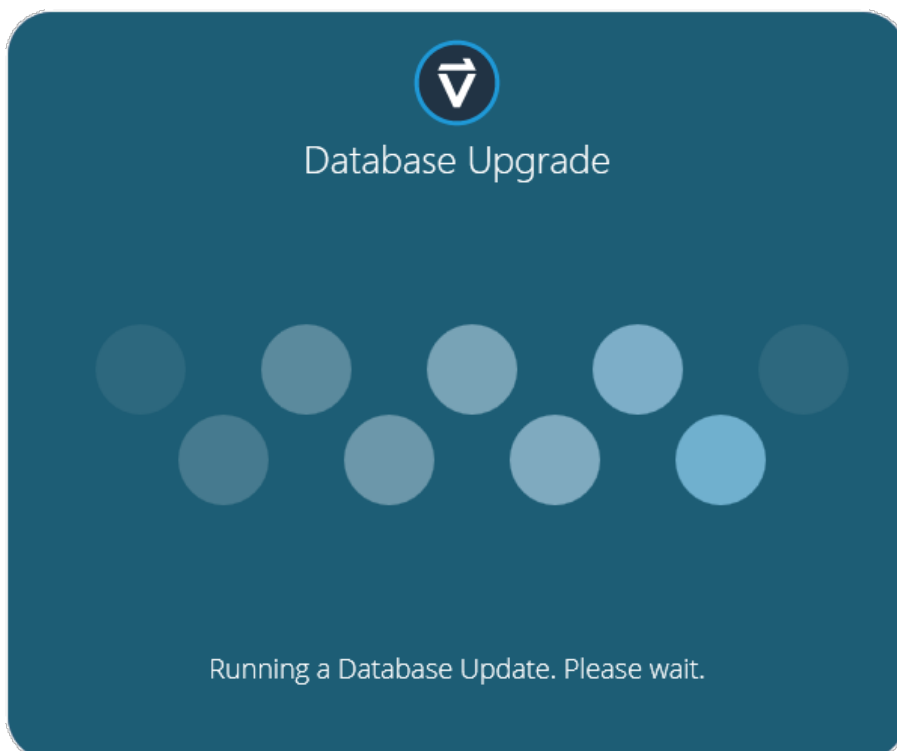
The monitor icon appears when more than one monitor is connected. These are used to select which screen VectorPro opens on upon login. Select between the primary and additional monitors.

Clicking the username field displays a list of all available users. The flag denotes the language setting last used by each user.



The user's language can be set when the user is logged on. Here, all the users operate with the English language apart from 'Petter' who uses Swedish.

7.1 Database Upgrade



When opening an existing database with a new version of VectorPro the software automatically carries out a database upgrade at launch. The upgrade is indicated by the database upgrade window opening (pictured above).

Important! For users with large databases, this operation can take a long time. Please do not close the program and allow the operation to complete.

8 Further Information

For more information relating to VectorPro, please return to the User Guidance section of this user manual and continue to the next applicable user manual.

Original instructions published in English language.

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Source URL (modified on 09/03/2022 - 12:02):<https://help.mecmesin.com/docs/vectorpro-operating-manual-introduction-and-initial-setup>