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# **Reactec Analytics Platform**

## **Tool Tag Manager**

This document provides information on using the Tool Tag Manager

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## About this document

This document is supplied as a part of the Reactec Analytics Platform.

**Intended Purpose** This document provides information on using the Tool Tag Manager

**Intended Audience** This guide is intended for staff required to program and fit HAVwear Tags for use as part of the Reactec Analytics Platform.

**Conventions used** This guide uses the following formats for safety notices:



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*Indicates a hazardous situation which, if not avoided, could result in death or serious injury.*

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*Indicates a hazardous situation which, if not avoided, could result in moderate injury, damage the product, or lead to loss of data.*

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**Notice**

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*Indicates a hazardous situation which, if not avoided, may seriously impair operations.*

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*Additional information relating to the current section.*

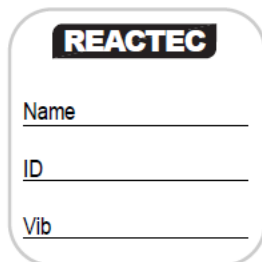
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# 1 Programming Tags

HAVwear Tags are small, robust components which are adhesively attached to all monitored vibrating equipment.



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**Figure 1: Unmounted HAVwear Tag**

HAVwear Tags are programmed with tool specific data which is read by the HAVwear using RFID communication.

Additionally customers may choose to display some information externally on the HAVwear Tag.

For more information, refer to the "Tool Tag Manager" guide.

## 1.1 Prerequisites for programming a Tag using the RFID Read/Writer

The following equipment and facilities will be required to enable the programming of Tags using the RFID read/writer;

- A PC/ Laptop/ Tablet (computer) running Windows 7/8 (32/64 bit) operating system.
- RFID Reader/ Writer.
- A working internet connection to allow the download of the required drivers and software.
- HAVmeter or HAVwear Tag.

## 1.2 Install RFID Tag Read/Writer

### 1.2.1 Install Hardware

Connect RFID Reader/ Writer to any USB port of a computer.

### 1.2.2 Install Driver Software

Dependant on operating system, the drivers for the RFID Reader/ Writer may install automatically. If, however, the driver does not install automatically the driver software is available from the Analytics Software.

1. Login to the Analytics Software using the Analytics account.
2. Click on the download icon, as shown below encapsulated in the red square.

## 1 Programming Tags



3. The user will then be presented with the download screen, as shown below, where the software can be downloaded by clicking on 'Tool Tag Manager' on the side menu.

**RFID Tag Manager** WMC1

**Description**  
An application to manage the programming of RFID Tool Tags  
Current version: 1.4

**System Requirements**

- PC with Windows 7 or later installed

**Hardware Drivers**  
The RFID Reader / Writer supplied by Reactec is an Omnikey 5021 CL, depending on the Operating System installed on your PC, you may have to install drivers for device to work properly. These can be downloaded from the link below:  
When you arrive at the website you will need to:

1. Select 'Omnikey' from the Brands drop down list
2. Select '5021 CL' from the Products drop down list
3. Select your Operating System from the OS drop down list
4. Download and install the relevant driver from the search results

[Omnikey Drivers](#)

**Software Download**  
Click the download button to start the download process

[Download \(49.2 MB\)](#)

**Installation Instructions**

If you have a previous version installed, remove it before installing the latest version

- Extract the zip file to a location on your PC
- Run the setup.exe installer (you will require admin rights for this)
- Go through the installer steps, no modifications are required
- Once successfully installed, restart your PC

4. From this screen the drivers for the HID Omnikey can be installed, by following the instructions under 'Hardware Drivers'.

Note: On successful installation of both the hardware and software, white light will be visible on the edges of the RFID Reader/ Writer

## 1.3 Install Reactec Tool Tag Manager

The Reactec Tool Tag Manager software is available from the Analytics Software

1. Login to the Analytics Software using the Analytics account credentials.
2. Click on the download icon as shown in 'Install Drivers Software' section.

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3. The user will then be presented with the download screen , as shown in 'Install Drivers Software' section, where the 'Tool Tag Manager' software can be downloaded from by clicking 'Download (49.2MB)' under 'Software Download'.
4. Open the folder and right click on the 'setup.exe' file. On right click user will see an option 'Run as administrator'. Click on this option.
5. A 'User Account Control' box will appear; to confirm the installation click on 'yes' button.
6. The installer will launch and the user will see a screen similar to below.



7. Follow the instructions as written on screens and click next. At the end click on the 'finish' button.
8. Once the install is complete power down the PC, then power back on.
9. After the completion of the installation process, two shortcuts will be created on the computer. One will be on the Desktop and the other will be in the 'Start' menu.

Note; RFID Reader/ Writer is connected to the computer at this time, then remove it and reconnect it.

## 1.4 Downloading and Populating the Tool Tag Programming Template

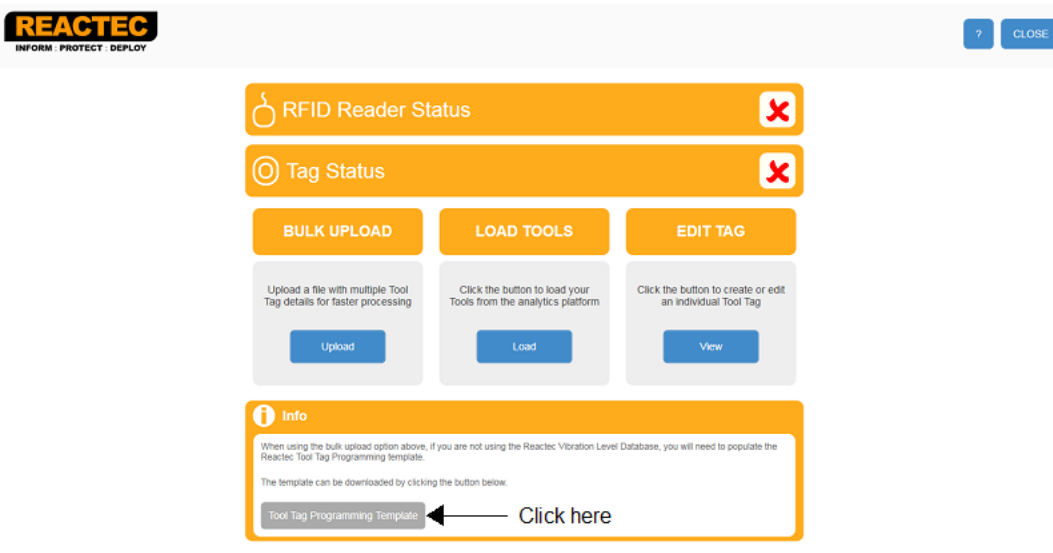
Before attempting to program tool tags, an Excel template must be populated with the tool information that is required to be programmed on the tool tag.

The Excel template can be downloaded from both the Analytics and the Tag Manager.

### 1.4.1 Downloading the Tool Tag Programming Template from Tool Tag Manager Software

1. Open Tool Tag Manager Software.
2. Click 'Tool Tag Programming Template' from within the bottom box.

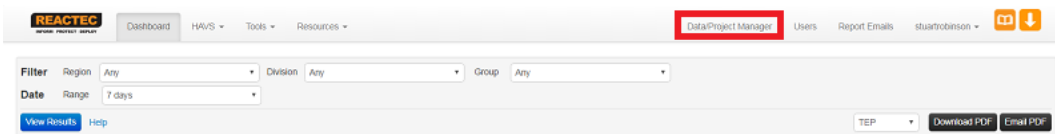
### 1 Programming Tags



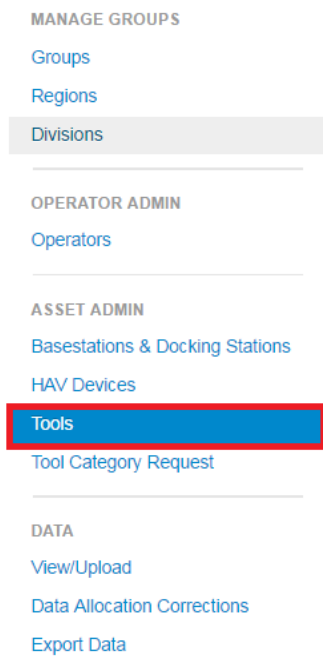
3. Save the template to a known area on the computer.

## 1.4.2 Downloading the Tool Tag Programming Template from the Analytics Software

1. Login to the Analytics Software.
2. Click on 'Data/Project Manager'.



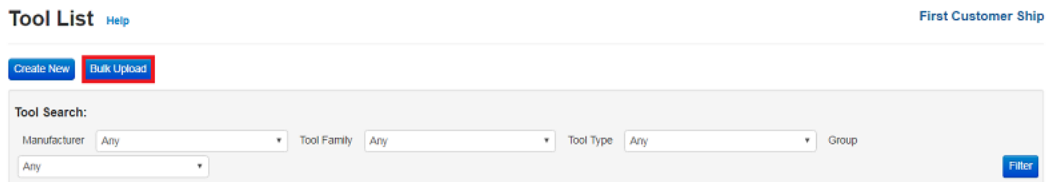
3. Click on 'Tools' from the side menu.



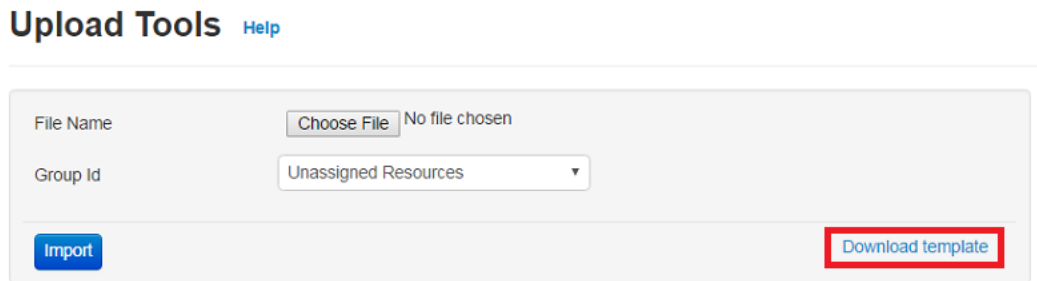


1 Programming Tags

4. Click on the 'Bulk Upload' button.



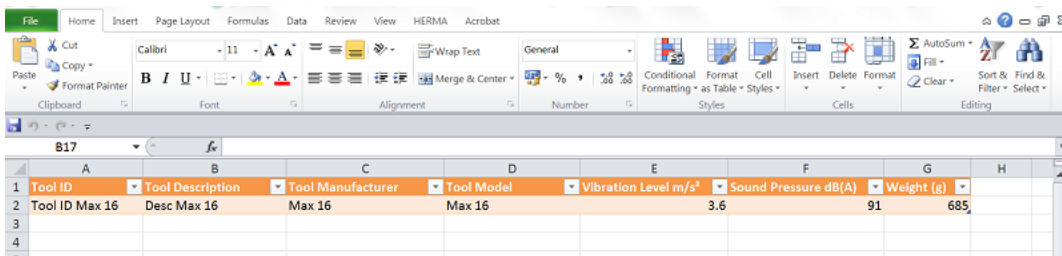
5. From this screen, click on 'Download Template', from within the grey box.



6. Save the Template to a known area on the computer.

### 1.4.3 Populating the Tool Tag Programming Template

1. Locate and open the saved 'Tool Tag Template'.
2. The Excel file will display the table as shown below.



3. Populate the Template with the tool information that is required to be programmed into the tool tag. Minimum requirements for populating the Template are:
  - Tool ID (maximum 16 characters)
  - Tool Description (maximum 16 characters)
  - Tool Manufacturer (maximum 16 characters)
  - Tool Model (maximum 16 characters)
  - Vibration Level

### 1.4.4 Programming Tags

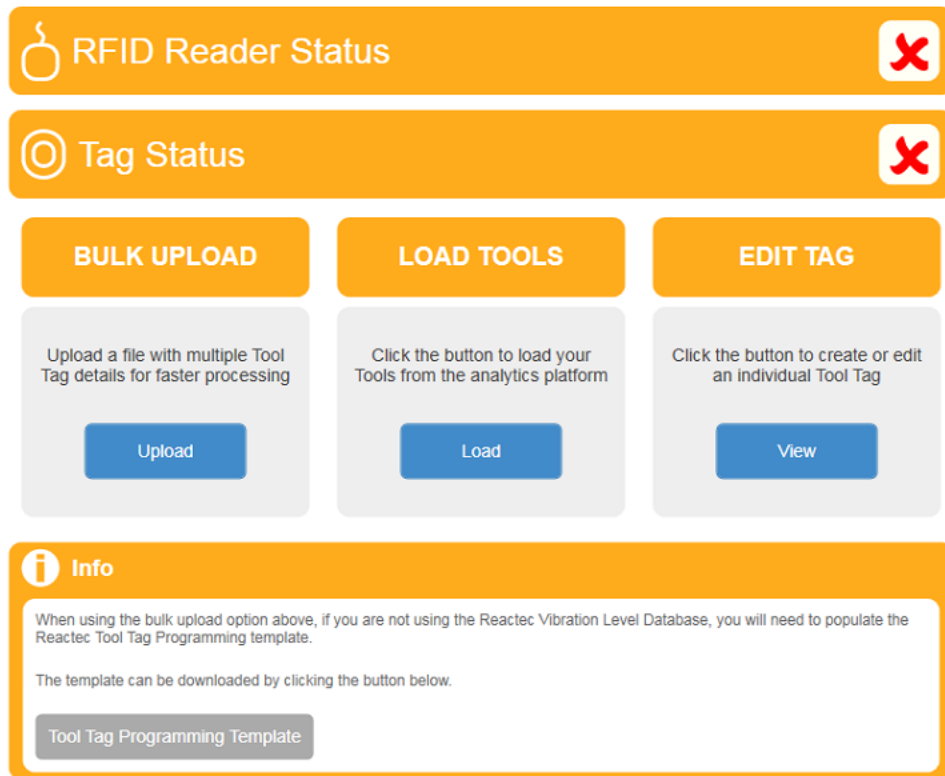
Tools are programmed using the Tool Tag Manager Software. There are 2 options to load the tools to the software application.

**Please note - If a tablet is being used to program the tags, please go to section 2.4.4.2**

### 1.4.4.1 Bulk Upload direct to the Tool Tag Manager Software

**\*Please note, this option only uploads to the Tool Tag Manager Software and will not show in the Analytics Software until the tool has been used with HAVwear.**

1. Open Tool Tag Manager Software. The screen below will be displayed.



2. Connect RFID Reader/ Writer to the computer. A green tick will be displayed in the RFID Reader/ Writer Status box.
3. Click on the 'Upload' button within the 'Bulk Upload' box.
4. Click 'Load File, locate the populated Excel file. Select it then click open.
5. The tool information will now be imported as seen below.

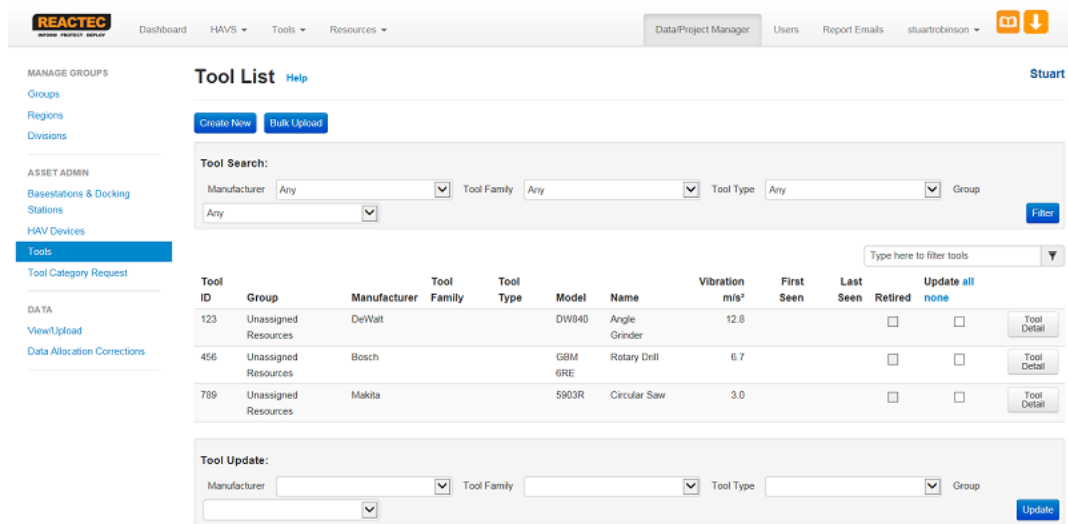
Tool ID	Description	Manufacturer	Model	Vibration Level m/s <sup>2</sup>	Weight g	Noise dB(a)	Action
123	Angle Grinder	DeWalt	DWB40	12.8	0	0	Write
456	Rotary Drill	Bosch	GBM GRE	6.7	0	0	Write
789	Circular Saw	Makita	590DR	3	0	0	Write

6. If there are any sections highlighted by a red box, the tools are missing information and will require populated for those tools before continuing.

### 1.4.4.2 Download Tools from the Analytics Software

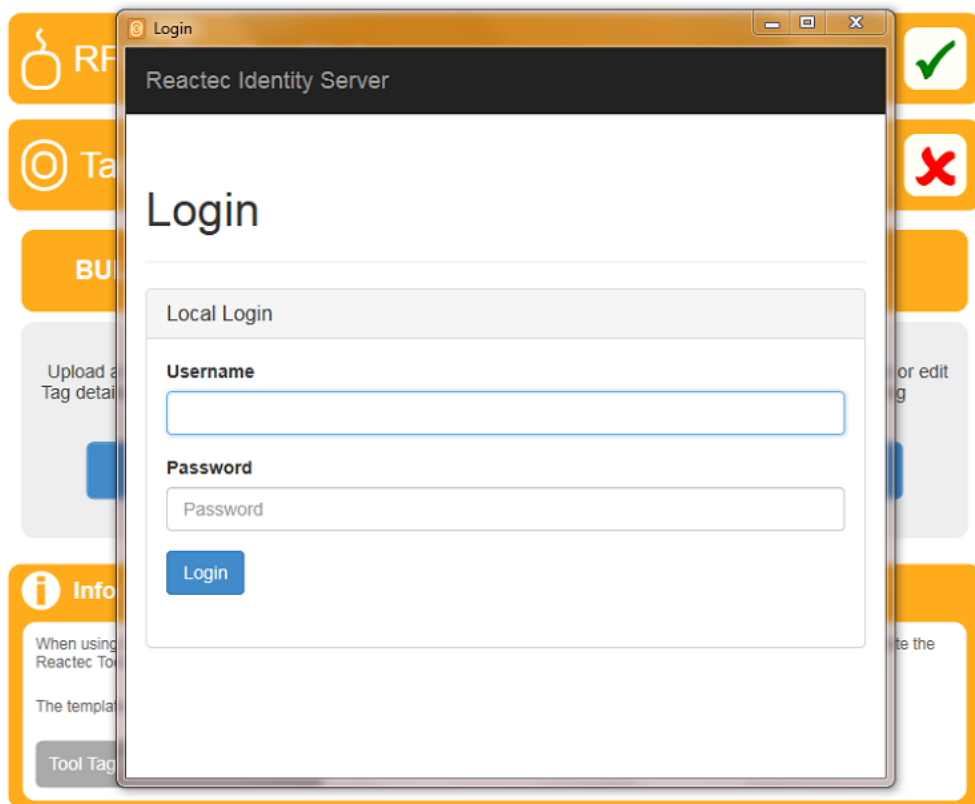
To download tools from the Analytics Software to the Tool Tag Manager Software, the tool list requires to be uploaded to the Analytics Software first.

1. Login to the Analytics Software using a PC/ Laptop.
2. Click 'Data/Project Manager'.
3. Click 'Tools' from the side menu.
4. Click the 'Bulk Upload' button.
5. Click 'Browse', locate the saved template, then click 'Open'
6. Click on 'Import'
7. All tools will now be visible in the Analytics Software Tool List as shown below.



8. Open Tool Tag Manager Software.
9. Connect RFID Reader/ Writer to the computer. A green tick will be displayed in the RFID Reader/ Writer Status box.
10. Click 'Load' from within the Load Tools box.
11. A prompt to login using the Analytics Software account credentials will appear.

1 Programming Tags



12. All tools will now be displayed in table format as shown below.

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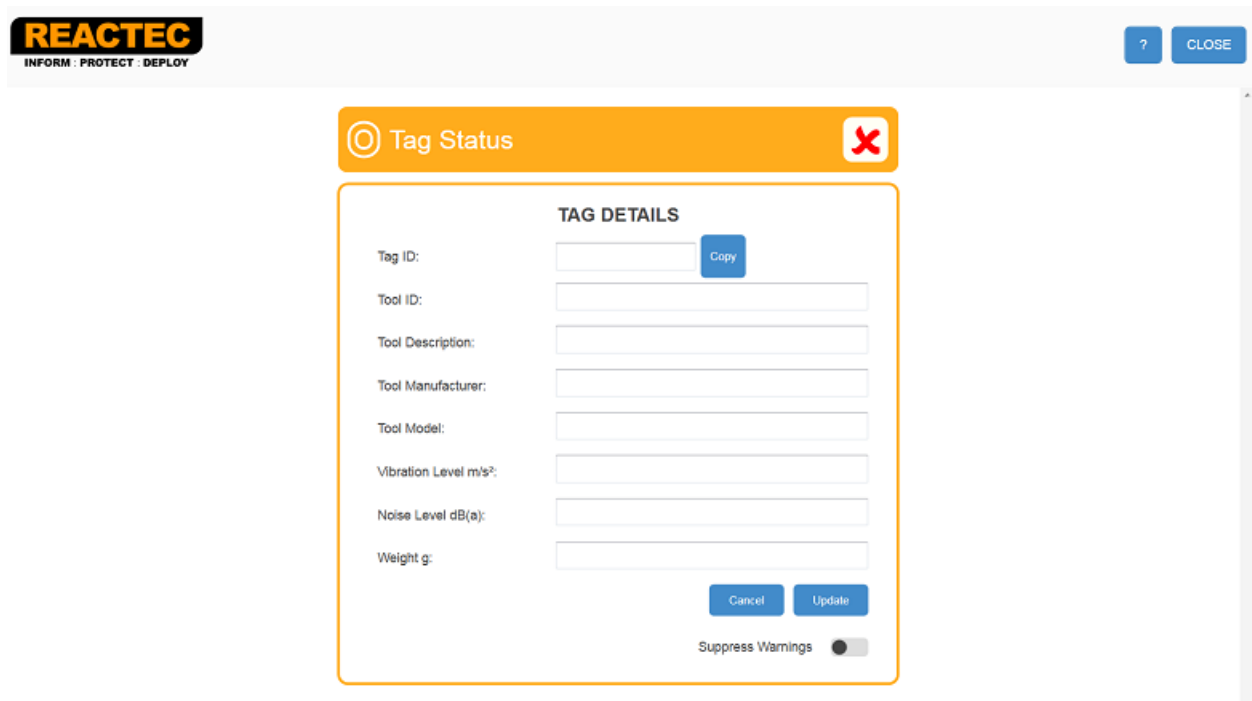
← Back Load File Refresh [Dropdown] Tag Status [X]

Tool ID	Description	Manufacturer	Model	Vibration Level m/s <sup>2</sup>	Weight g	Noise dB(a)	Action
123	Angle Grinder	DeWalt	DWB40	12.8	0	0	Write
456	Rotary Drill	Bosch	GEM 6RE	6.7	0	0	Write
789	Circular Saw	Makita	590DR	3	0	0	Write

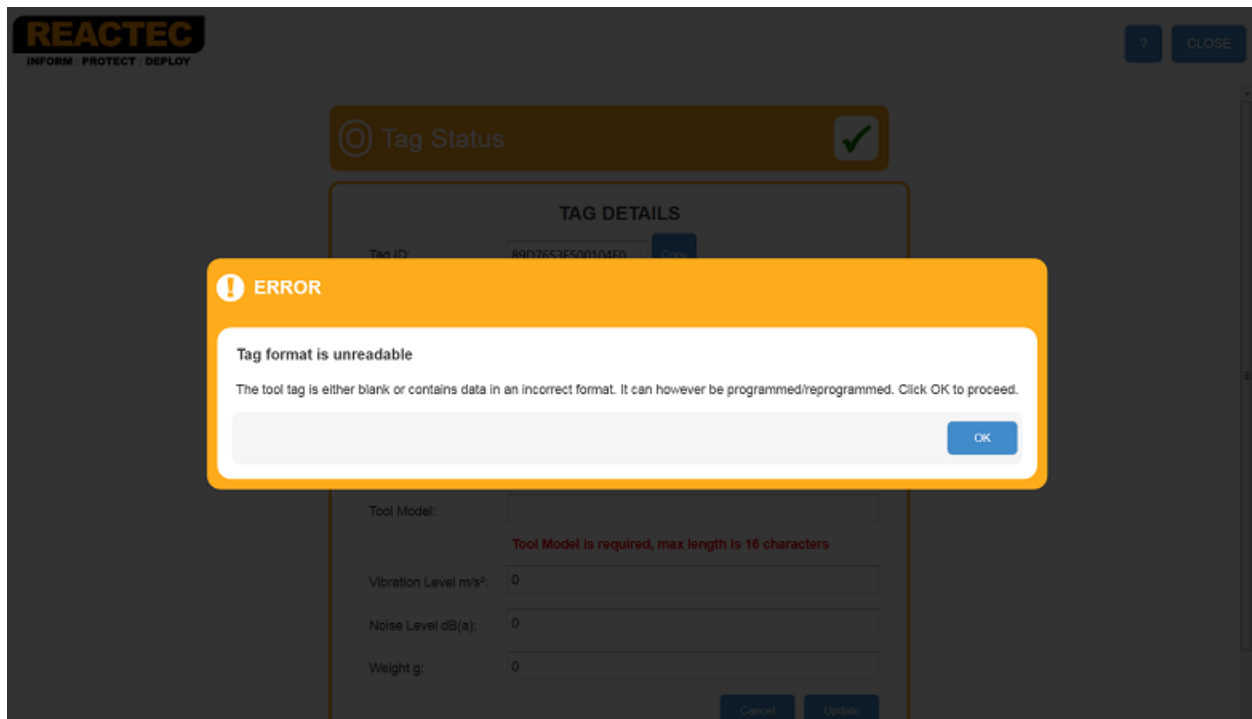
13. If there are any sections highlighted by a red box, the tools are missing information and will require populated for those tools before continuing.
14. Click the cursor within the red box and manually add the missing information to those cells.
15. Once complete, place a Tag on the RFID Reader/ Writer. A green tick will be displayed in the Tag Status when successful connection is confirmed with a Tag.
16. To upload the data to the Tag, press the appropriate 'Write' button.
17. To program another Tag, simply remove the previously programmed Tag and place new one on the RFID Reader/ Writer. Once the Tag Status displays a green tick it is ready to be programmed.
18. When all necessary Tags have been programmed, press 'Close' to exit the Software.

### 1.4.5 Editing Individual Tag Details

1. To Edit a Tag, click 'View' in the 'Edit Tag' area. The screen below will be displayed.

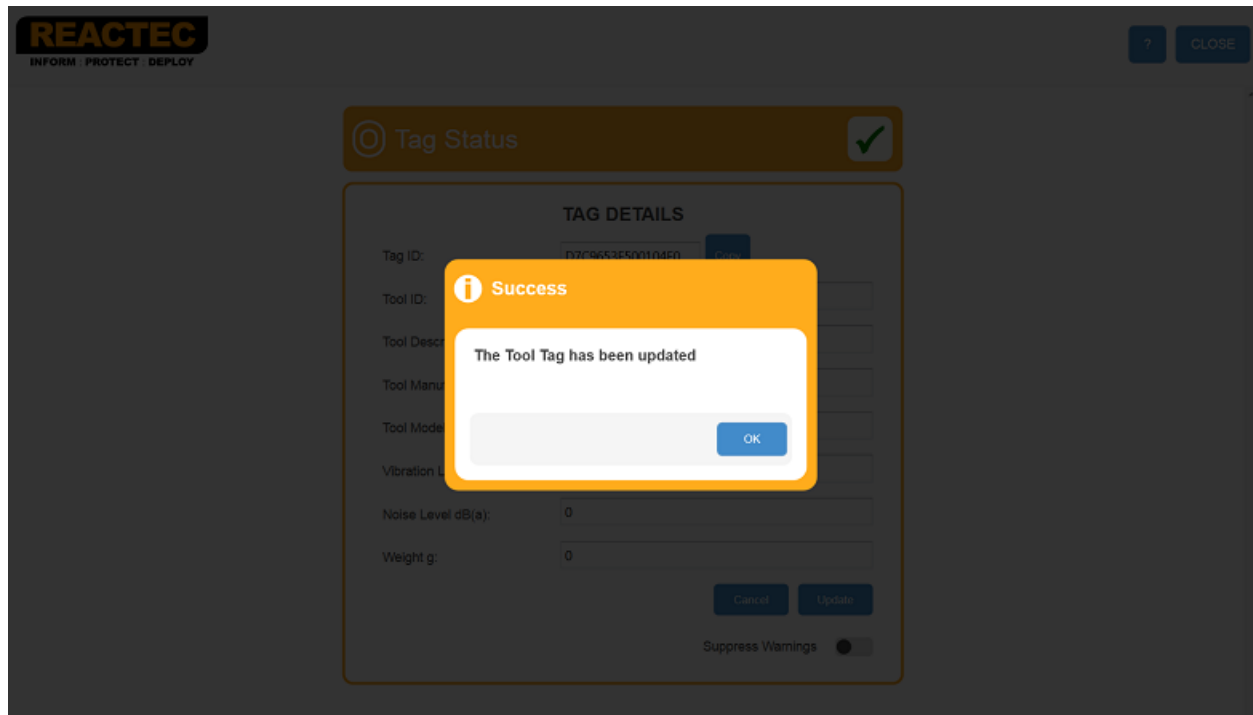


2. Place the Tag that requires updating onto the RFID Reader/ Writer.
3. If the Tag that is placed on the RFID Reader/ Writer has been successfully read, the details will be displayed on the screen. If the Tag is blank the message below will be displayed.



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4. The details shown on the screen can be easily altered by selecting the appropriate field and re-typing the required information into that field.
5. Once the required information has been inserted, click 'Update' to program the Tag with the updated information. If successful the following message will be displayed.



## 1.5 Vibration Level Database

Tool Tags can also be programmed via the Tool Vibration Database which is an online database of tool vibration levels gathered from data published by the tool manufacturers. Typically the manufacturer's data is generated from laboratory test work and may not represent the vibration levels in the workplace. The values should therefore be used as a guideline only. It is the responsibility of the employer to adhere to legal requirements applicable to workplace health and safety and to determine vibration values that are representative of the actual vibration emissions over time.

Access to the Tool Vibration Database is available to customers who have subscribed to the service.

### 1.5.1 Searching an individual Tool

1. • Login to the Vibration Database - <https://vldb.reactecanalyticsplatform.com/>
2. • Click on the 'Tools' tab at the top of the page.
3. From the drop down list, click on 'Search'.
4. Enter the tool information into the following fields: Manufacturer, Model, and Model Name.  
See below example, if searching for a Bosch GBM 10 Drill.

### Tool Search

**Manufacturer**

**Model**

**Model Name**

Tools Found 5

Manufacturer	Model	Model Name	Vibration Level	Sound Pressure	Sound Uncertainty	Info Unavailable	Notes
Bosch	GBM 10	Rotary Drill	2.50			<input type="checkbox"/>	<a href="#">Edit</a> <a href="#">Details</a>
Bosch	GBM 10RE	Rotary Drill	2.50			<input type="checkbox"/>	<a href="#">Edit</a> <a href="#">Details</a>
Bosch	GBM 10E	Rotary Drill	2.50			<input type="checkbox"/>	<a href="#">Edit</a> <a href="#">Details</a>
Bosch	GBM 10SRE	Rotary Drill	2.50			<input type="checkbox"/>	<a href="#">Edit</a> <a href="#">Details</a>
Bosch	GBM 10-2RE	Rotary Drill	2.50			<input type="checkbox"/>	<a href="#">Edit</a> <a href="#">Details</a>

- If the tool Manufacturer is not known, then choose 'Any' from the drop down list. If the Model or Model Name is not known, then leave it blank.
- Once all the information has been entered, click on 'Search'.

### 1.5.2 Searching Multiple Tools

- Click on the 'Tool' tab at the top of the page.
- From the drop down list, click on 'Export'.
- Click 'Download the tool import template here'.
- Once downloaded, enter the specific information for each tool into the correct column and save the file. See below example:

	A	B	C	D
1	ToolID	Manufacturer	Model	ModelName
2		Makita	1100	Cordless Blower
3		Bosch	GWS 23-180	Grinder
4		Milwaukee	Kango 900	Hammer
5		Stihl	MS 661 C-M	Chainsaw
6		Atlas Copco	RAM06	Rammer
7		Kobe	DP513	Drill
8		John Deere	717E	Mower
9		Panasonic	EY4541	Saw
10				

1 Programming Tags

5. • Go back to the 'Export' page and click 'Browse'.
6. Select the Excel file that you have just saved and click 'Upload'.
7. The database will search for all of the tools contained within the spreadsheet. Tools within the database will be displayed as 'Matched Entries'. Tools not in the database will be displayed as 'Unmatched Entries'.

[Download the tool import template here](#)

Matched entries 7, Unmatched entries 1,

**Matched Entries**

Customer Tool Id	Make	Model	Model Name	Vibration Level	Sound Pressure	Sound Uncertainty	Override	All None
	Makita	1100	Planer	3			<input type="text"/>	<input type="checkbox"/>
	Bosch	GWS 23-180	ANGLE GRINDER	5.5			<input type="text"/>	<input type="checkbox"/>
	Milwaukee	Kango 900	Breaking Hammer	11			<input type="text"/>	<input type="checkbox"/>
	Atlas Copco	RAM06	Rammers	22			<input type="text"/>	<input type="checkbox"/>
	Kobe	DP513	Drill	5.4			<input type="text"/>	<input type="checkbox"/>
	John Deere	717E	Mower	2.04			<input type="text"/>	<input type="checkbox"/>
	Panasonic	EY4541	Saw	8.79			<input type="text"/>	<input type="checkbox"/>

[Export](#)

**Unmatched Entries**

Tool ID	Make	Model	Model Name	Info Unavailable
	Stihl	MS 661 C-M	Chainsaw	<input type="checkbox"/>

**1.5.3 Programming Tags Using the Vibration Database**

1. Within the matched entries, click the tick box to the right of each tool you require to program a tag for.
2. Click Export button and save the file.
3. Follow section 2.4.5.1 Programming Tags.



## 2 Fitting a HAVwear Tag

- Locate a flat area approx. 30mm x 30mm on the tool (if not use the largest flat surface available). This area has to be easily accessible to allow an operators wrist to be placed over the tag.
- To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Isopropyl alcohol can be used to clean the surface.
- Remove the backing from the HAVwear tag and place on prepared area. Apply pressure for 10-20 seconds to the top of the tag to ensure adhesion.



*Ideal application range is 21°C to 38°C. Initial application to surfaces at temperatures below 10°C is not recommended.*

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