

T.M.E. Application Note

Setting up spreadsheet reports for Thermobarscan data

Background

The use of barcodes to identify individual water temperature test points is becoming increasingly popular with facilities managers and those responsible for implementing ACOP L8.

TME's unique MM7000-2D Thermobarscan combines a highly accurate digital thermometer with a barcode scanner in one instrument. The instrument records time, date and temperature of the asset against its barcode and will store up to 1000 readings.

A question that frequently pops up is 'Can I bring the data from the Thermobarscan into my own spreadsheet system?' To answer this, we'll take you through the process used by one of our customers.

Step 1 - Generating Location codes

Firstly establish an alphanumeric code to identify all the temperature test points in your building.

Most people do this by using existing location criteria such as floor, department, room number etc. You may be able to use or adapt existing identification references. You can use numbers or letters or a combination of both to create a unique id reference code for each test point. You are now ready to generate your barcodes.



Example: Royal Stoneshire County Hospital/Dept 09/Room47/ Sentinel Point1

Step 2 -- Generating your barcodes

A barcode is a graphic image using a system of vertical lines to represent numbers and letters. We need to turn each of your identification reference codes into a barcode.

There are a number of websites that create barcodes for free although they can be rather time consuming. A better solution is to download a barcode-generation add-in for Excel. There are several of these on the Microsoft website (search 'barcode font').

Step 3 - Asset register with barcodes

As your barcodes are generated, you can save them in a master database together with the identification reference information for each asset. See example below.

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Step 4 -- Creating a Spreadsheet Log Book

You can now copy the barcodes and identification reference codes from this database and paste into a new worksheet. You will need to add columns for temperature, date and (if required) time. You will need to name this worksheet so that you can include the name as the destination for your formulae as explained later. We have named this example 'sample 2009 temps'.

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Step 5 -- Download your temperature readings from Thermobarscan

To bring the temperature, time, and date of reading for each asset in to the spreadsheet, first download the data from the Thermobarscan using the software provided. The data will appear in a screen on your computer like this.

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Use the *Save As* function save the records to a data file on your desktop.

Step 6 - Importing the data into the Log Book

Open the data file using Excel and copy the information.

Go back to your Spreadsheet Log Book and create a new worksheet, then paste the data into this.

You now have the Thermobar readings list showing like this.

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You need to name this sheet before moving to the next step as you will need to include this name in your match formula. We have called this example 'sample csv file from MM7000'.

Step 7 - Combining the data - the tricky bit!

To combine the data you need to '**MATCH**' the id reference code for each asset on the spreadsheet with its counterpart on the Thermobar readings list.

To do this in Excel we need to make use of 2 functions, firstly we need to match the asset reference codes in the log book with those on the readings list. When we find a match we then produce an index pointer to all the data for that particular asset.

In the 'Sample 2009 temps' worksheet, identify a spare column and click on the cell corresponding to the first asset. Enter the following formula:

=+MATCH(D5,'Sample csv file from MM7000'!F\$3:F\$100,0)

This tells the programme to 'look' down the list of records and find the code which matches the code in cell D5. It produces an index or pointer to this data in the new column.

You can then copy & paste this formula into cells down the column. In the example below, we have called the new column 'Index'.

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The second function we will use is '*INDEX*'. this uses the index information generated above and brings in the appropriate data.

To bring the temperature record for each asset into the spreadsheet, we enter the following code into the cell where we want the temperature to appear:

=+INDEX('Sample csv file from MM7000'!D\$3:D\$100,'Sample 2009 Temps'!J5)

Note how the names 'Sample csv file from MM7000' and 'sample 2009 Temps' are used in the formula. This tells the programme to look down the temperature column on the Thermobar record list in row 24 and to bring this temperature reading into the highlighted cell. Again, simply copy and paste this formula into the 'Temp' cell in the other rows to bring in the data.

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The procedure for bringing the date record in is exactly the same but you now use the formula =+INDEX('Sample csv file from MM7000'!C\$3:C\$100,'Sample 2009 Temps'!J5).

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Step 8 - Building your Spreadsheet Log Book

To bring subsequent readings into your log book, firstly, download the new data from the Thermobarscan using the software provided and save as a data file as previously described.

Open the file using Excel, then simply copy the data into your original Thermobar record list (Sample csv file from MM7000), replacing the old data, and your Log Book will update automatically. Now save a copy of this with a suitable name and you are ready to go again.

Should you require any assistance with this or you would like us to set up a system to your requirements then please contact us.

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