Calibration Toolbox ADO
Quick Start Guide – How to Design Calibration Certificate Templates

This set of quick start guides is designed to help you to discover the main features of Calibration Toolbox ADO as quickly as possible. Like all sophisticated tools, it will take time and practice for you to become totally proficient, but you can begin to use some of its powerful features almost straight away.

Introduction

In a similar way, and for the same reason, that we produce calibration data templates, Calibration Toolbox ADO enables you to design calibration template certificates that can be re-used for all of your devices. Each certificate can be multi-paged with a mixture of landscape and portrait page orientations and can contain images, tabulated data, lines and borders and other features.

The Certificate Template Editor is accessed via the Certificate Templates item on the Main Menu. You will find a set of basic templates for you to view and edit in the sample database.

Building a New Template

The Certificate Templates menu item will open the editor in a number of ways as shown in fig 1 below.

Recent Templates: Your most recently used templates can be opened from the topmost menu item. Don't forget: the editor has a 'Save As' facility, so that you can adapt existing templates to accommodate different types of device

Open Template File: Brings-up a dialogue box enabling you to open template stored in a location

New Template: Enables you to design a completely new template.
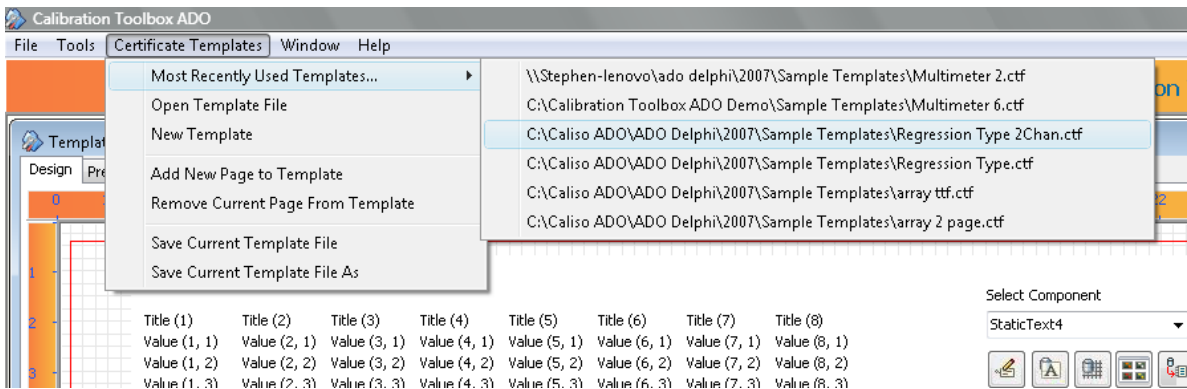

Fig 1   Opening the Calibration Template Editor

From the Certificate Templates Main Menu select 'New Template'. A new blank page will appear on your screen, together with the component selection palette.
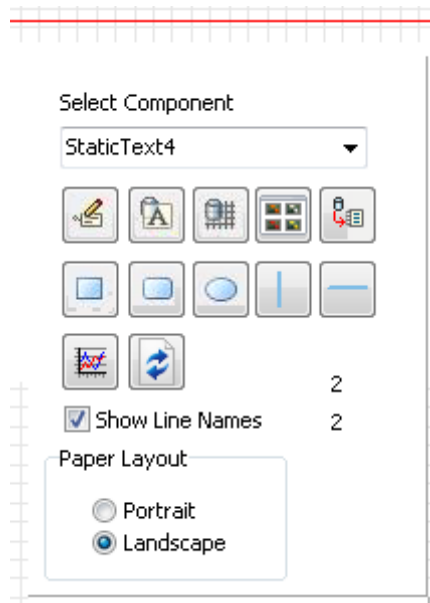

Fig 2:   The Certificate Component Palette

There are numerous components on the palette (see fig 2) that will enable you to build stylish and informative calibration certificates with a few clicks of the mouse. You can build certificates consisting of several pages, in a combination of portrait or landscape orientations, and then save them as PDF documents.

Because the certificates are designed using 'WYSIWYG' (What You See Is What You Get) methods, producing layouts to exactly suit your requirements couldn't be easier.

When you first open the editor you will see the template page. Across the top and down the left-hand side are the rule bars. These enable you to position components in exactly the position you need.
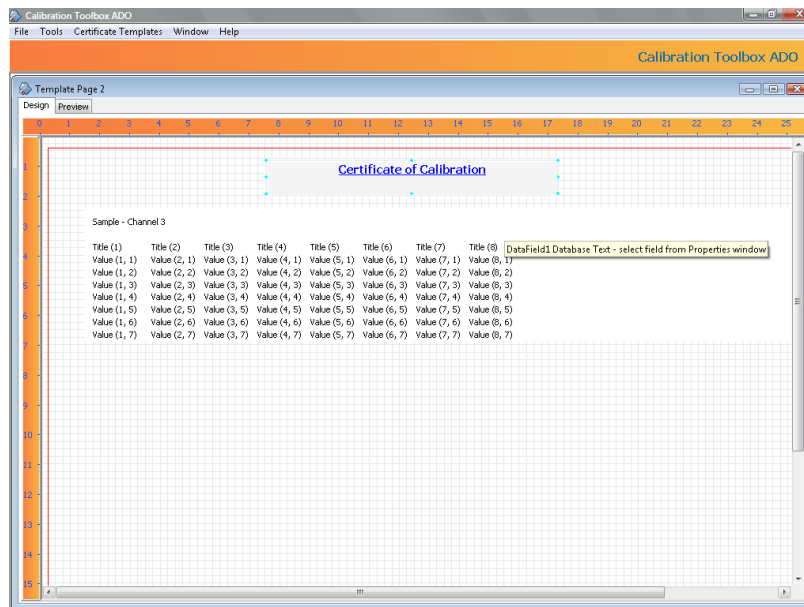

Fig 3:   The Editor Page

The components available are:

 Static Text Box

This is text that you will enter into the template once. Click the Static Text Button and drag a rectangle on to the page where you want the box to appear. See Figure 4. Click in the box to edit the text therein. You can move and re-size the boxes in to any position, and change the font and text alignment. Text entered automatically word-wraps to fit the width of the text box.
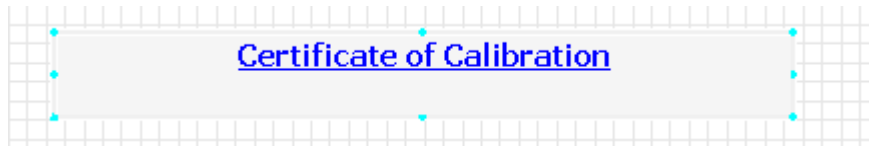

Fig 4:   Static Text Boxes

 DB Text Box

DB Text Boxes are one of the components that provide direct links between a calibration certificate template and the database entry for any device that uses the template to produce certificates.

This is text that will be automatically linked to the database entries on which the template is being used (fig 5).

Fig 5:   DB Text Boxes

Click the DB text button and drag a rectangle on to the page where you want it to appear. The DB text properties box will then appear. This has 2 tabs (as shown in fig 6). The first enables you to format the text - font, alignment etc. From the second, the Data Link tab, select the name of the database field to which you wish to link the text box.
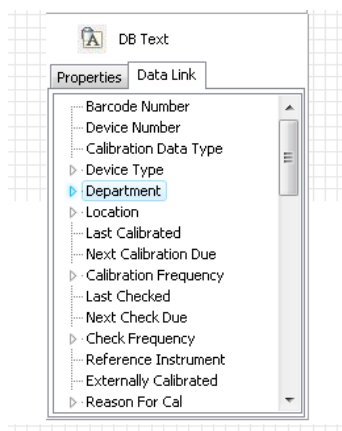

Fig 6: Linking DB Data to a Certificate Component

If you want to create a number of database field boxes to produce a tabular array, there is no need to enter each one individually. Click the 'DB Data Array' button and then click on the page where you want the top left hand corner of the array be.

A setup dialogue box will then appear (fig 7). This will then enable you to configure your tabular output.
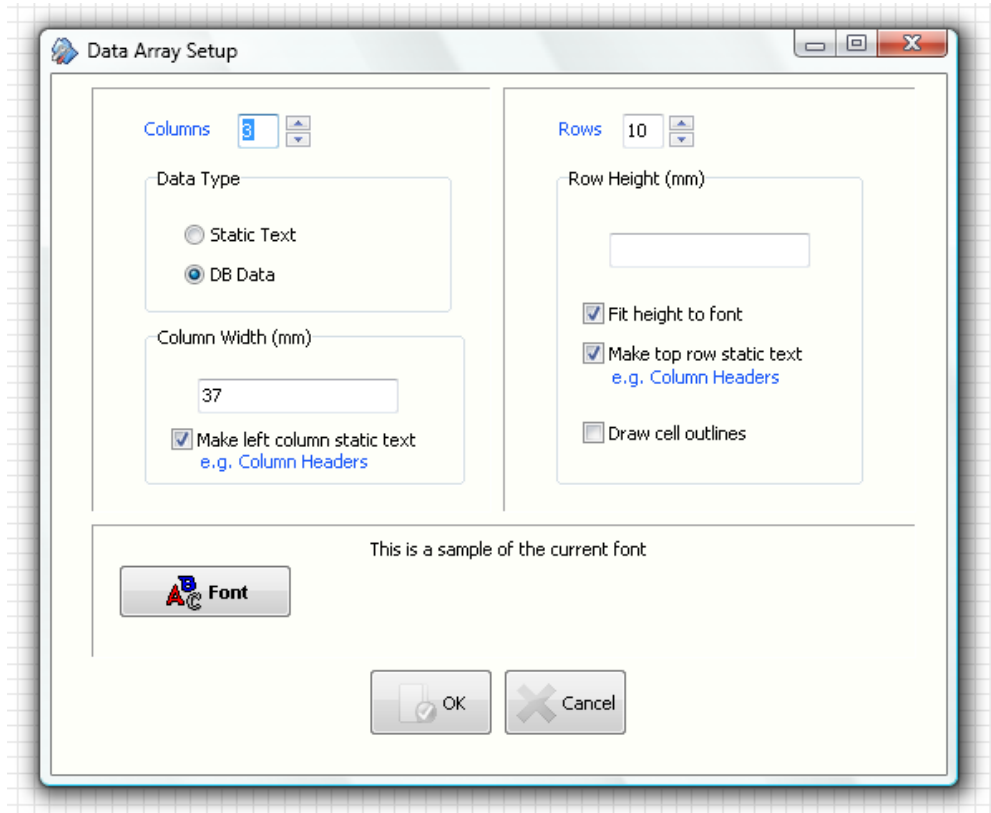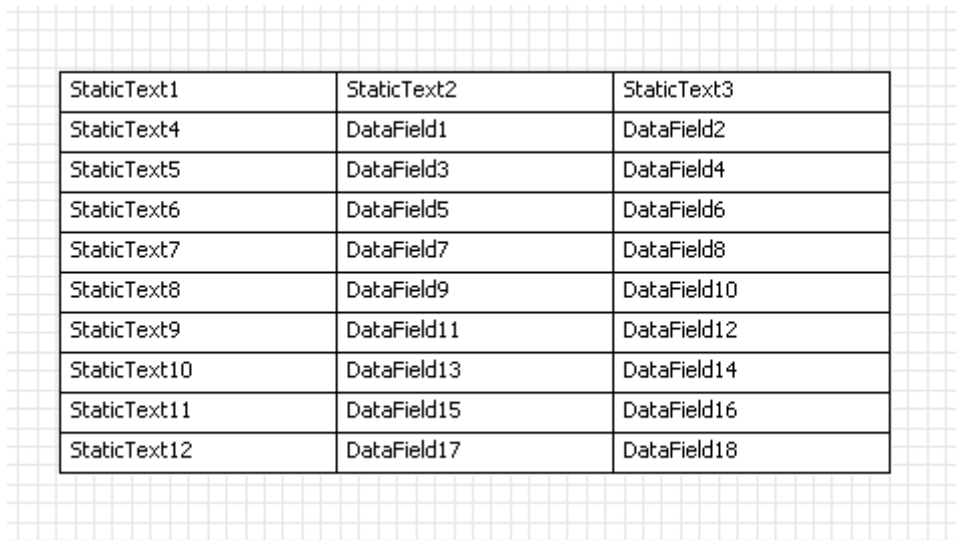

Fig 7:   Configuration of Tabular Array

Arrays can be in either 1 of 3 formats:

- All Static Text Boxes

- All DB Data Boxes

- Compound - where the top row and/or left-hand column are static text boxes and the remainder (the inner portion) are DB data boxes. This is intended for use where the tabular output requires either row or column headers.

Once you have created your array, each cell behaves in the same way as their individual counterparts and is formatted as described in the sections above covering static and DB text.

The setup dialogue box also enables you to select the number of columns and rows in your array. You can also specify the height of the rows and the fonts to be used.

StaticText1	StaticText2	StaticText3
StaticText4	DataField1	DataField2
StaticText5	DataField3	DataField4
StaticText6	DataField5	DataField6
StaticText7	DataField7	DataField8
StaticText8	DataField9	DataField10
StaticText9	DataField11	DataField12
StaticText10	DataField13	DataField14
StaticText11	DataField15	DataField16
StaticText12	DataField17	DataField18

Fig 8:   A Tabular Array with row and Column Headers

Important Notes:

- To move the array to a different position on the page, follow the procedure described in the section 'Moving Several Components at Once' below

- Avoid using the cell Alignment buttons described in the section on the Multi-Select properties box below as this might cause cells to become overlapped

Images

The majority of calibration certificates will contain images of either a company logo or the accreditation body symbol. To add an image click the image component button on the palette and then click the page where you want the image to appear. A file dialogue box will then open to enable you to choose your file which can either be BNP or JPG format.

Fig 9:   Adding an Image to your Certificate Template

Before adding an image such as a company logo or accreditation body's symbol, please make sure that you are entitled to do so and that you comply with any copyright conditions that might apply.

Tabulated Calibration Data

In Calibration Toolbox ADO, you create calibration data templates for each type of device you calibrate. You can specify the number of channels, and name them. You can also specify the number of calibration points for each channel and enter tolerances and nominal values. The user then simply enters the measured calibration data, clicks the 'Calculate' button and Toolbox ADO does the rest. Upper and lower limits are automatically calculated based on the specified tolerances, and a pass/fail indication given.

The vast majority of calibrations performed are based on 3 basic types:

Simple Comparison: Where the measured value is compared to a traceable set of references and no adjustments are possible (for example, a glass thermometer or steel rule)

As Found - As Left: Comparisons performed as the device is received from the user, and after adjustment. The nominal value is the same as the value of the traceable reference (for example, a set of slip gauges)

Extended As Found - As Left: Comparisons performed as the device is received from the user, and after adjustment. The nominal value need not be same as the value indicated by the traceable reference (for example, a pressure gauge or resistance thermometer)

When you are designing templates, there is no need for you to be concerned about the exact details because the Tabulated Calibration Data component does all the work for you. You can add a completely auto formatted data table for each channel of the calibration data template.
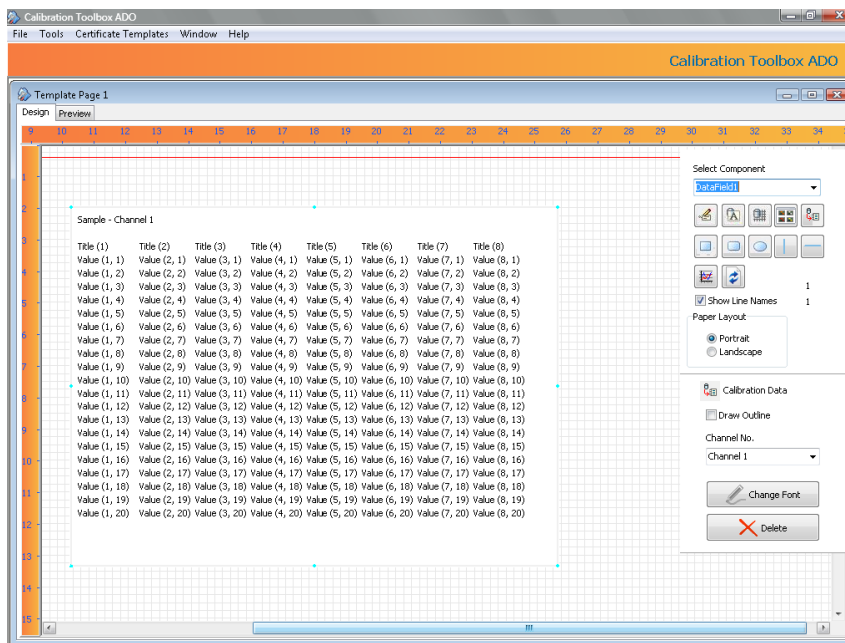

Fig 10: The Tabulated Calibration Data Component

Click the calibration data button and drag a rectangle on to the page where you wish the table to appear (fig 10). Then select the channel number that you require from the calibration data properties box (fig 11).

You can also specify at this time:

- The font for the table
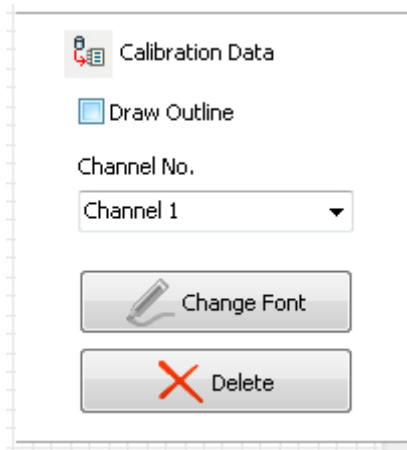- Whether you require the table to have visible cell outlines

Fig 11:   Selecting Channel for the Tabulated Calibration Data Component

Notes:

- Unlike the DB data Array describe above, this component can be moved and resized as a single unit

- Always ensure that the control is wide enough to show all columns. The Extended As Found - As Left calibration template type has the most columns and it is recommended that, where this is used, the page is set to Landscape mode

- In the designer, all 20 available calibration points can be seen. If you are using few, adjust the height of the controls to suit the number of rows (calibration points). That way you will be able to fit several channels on a single page

   Other features

There are several other components that enabled you to add style to your certificates these are:

- Calibration Graph
- Vertical Lines
- Horizontal Lines
- Rectangular boxes
- Circles and ellipses

Calibration Toolbox ADO
Quick Start Guide – Additional Design Information

Moving and Editing Several Controls at Once

There will be times when you need to move a number of components on the page while keeping their relative positions fixed. You will also need to change the properties of a number of components together (for example their font size or colour). This is where the Mulit-Select facility becomes very useful. We can show this by way of an example:

In Fig 12 below, we have placed four Static Text boxes on our page. Note that their left-hand sides are not algned. To select all 4 boxes toegther, drag a focus-rectangle around them and release the mouse button.

Fig 13:   Muti-Selection of Components

When the mouse button is released, all four boxes are highlighted (fig 14), and the Multi_select Options box is now visible.
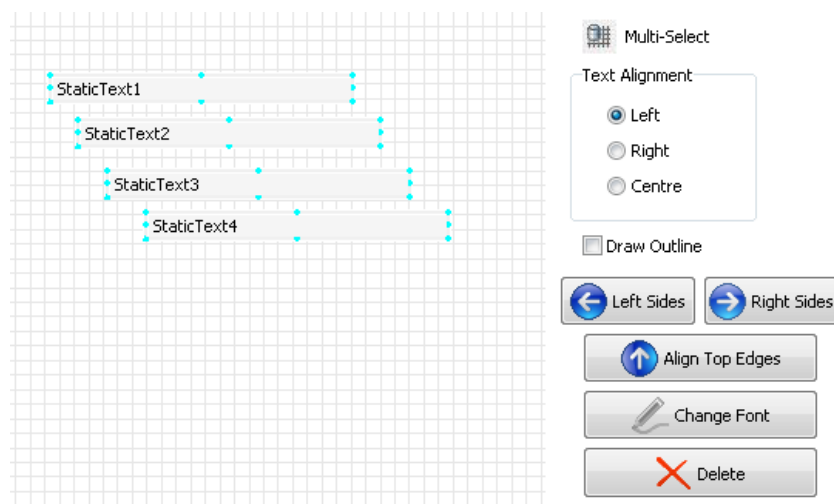
Fig 14: All Components are Now Selected

Click the 'Left Sides' button to align the left-hand edges of the selected boxes (fig 15).
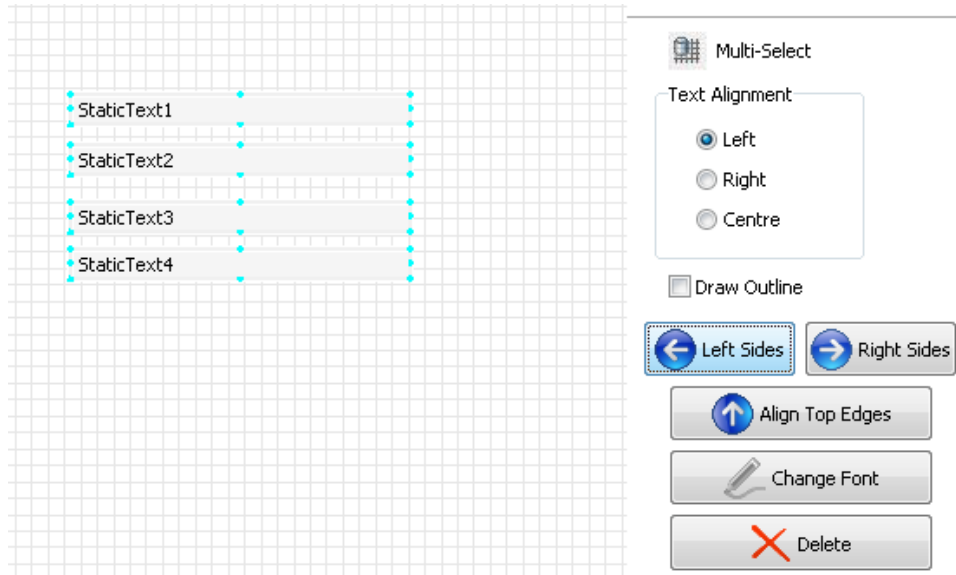
Fig 15:   The Left-Hand Edges are Now Aligned

In addition to aligning edges, the the Multi-Select box can be used to:

- Change Font
- Align Top Edges
- Show Box Outlines
- Specify Text Alignment

To Move Several Controls at Once:

- Highlight your required controls as described above

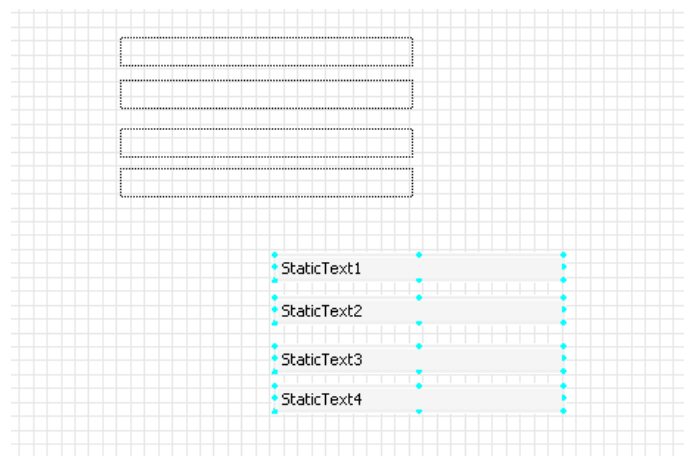- Hold down the SHIFT key and DRAG anywhere on the page except on any control (see fig 16).

Fig 16:   Moving Several Components Together

You will then see the outlines of the new component postions as you move the mouse. Release the mouse button when the components are in the desired position.

Multi-Page Certificates

Calibration certificates should, as a rule, be kept as simple as possible. There will be occasions, however, when you will need to design multi-page certificate templates, for example if you are including tabulated calibration data for devices that have more than one channel.

Adding pages to a certificate template is done from the Certificate Templates main menu item as shown in fig 17. Select the 'Add New Page to Template' item.
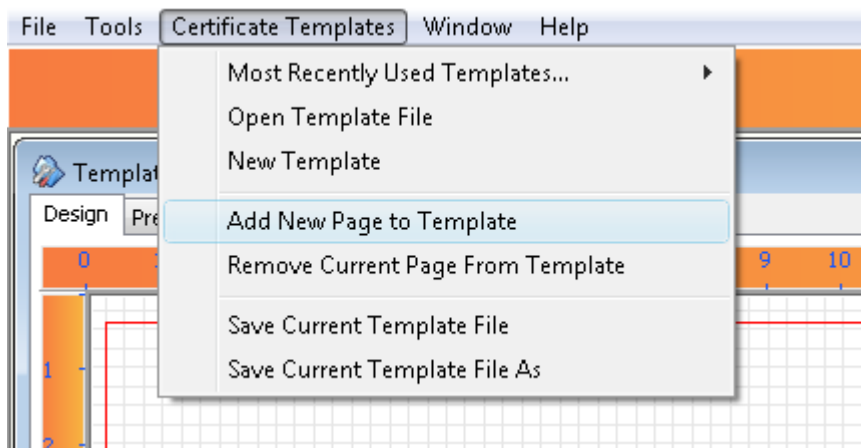

Fig 17:   Adding a New Page to a Certificate Template

You can have a mix of page orientations within the same certificate template. We recommend that Tabulated Calibration Data components are placed on Landscape orientated pages.

Moving between the template pages is straight-forward. Click the 'Window main menu item (fig 17), to see list of all open Toolbox ADO windows. Simply select the page you wish to view.
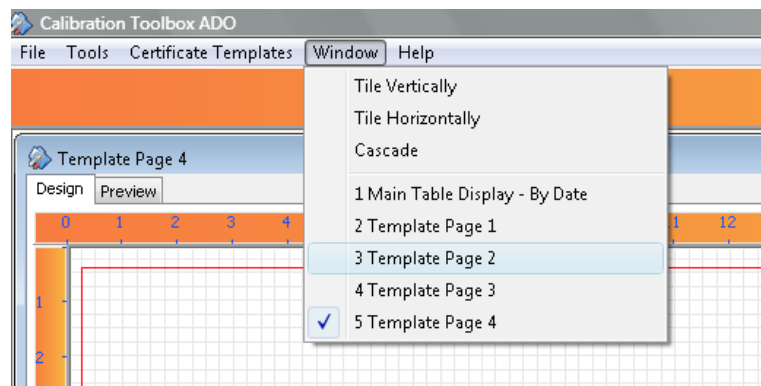

Fig 17:   Moving Between Template Pages

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Quick Start Guide – Creating, Saving and Viewing Certificates

Linking a Device to a Calibration Certificate Template

The certificate template to be used for a device is specified in its Calibration Data Template (fig 18). Calibration Data Templates are covered in detail in another guide. This way, devices using the same calibration data template will all use the same certificate template (logical enough). This does not mean that you can't use the same certificate template in different calibration data templates, though.

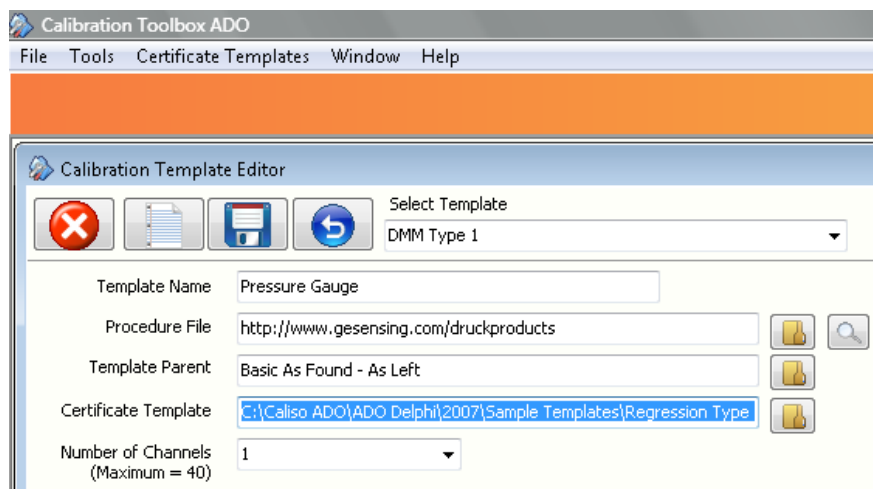Keep all of your templates in a single folder for ease of access.

Fig 18: Linking a Certificate Template to a Calibration Data template

Building a New Certificate

To do this you need to be familiar with the Core Data (device in detail) window - this is described in another reference guide.

Navigate through the tabsets (shown in fig 19) as follows:

- Select Current Calibration Data from the top tabset

  The Measurements tab on the tabset below is where you enter the calibration data and perform calculations. Make sure that these are up to data and correct before you build your certificate.

  If you have included Tabulated Calibration Data components in your certificate template, they will automatically be filled with the contents of the data grid shown in fig 19 when you build your certificate (in this case there is only one channel 'Temperature'. So only one Tabulated Calibration Data component is needed on the template).
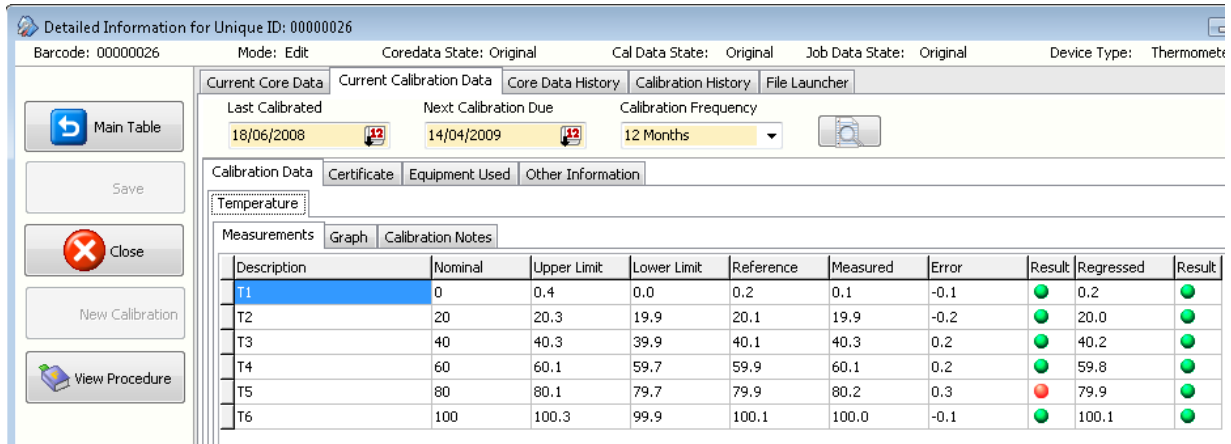
Fig 19:   The Core Data Window Tabsets

Now select the 'Certificate' tab. At first, there is not really all that much to see but, don't be fooled, there are some powerful features available here.

Look towards the bottom of the window. You will see two pieces of information as shown in fig 20:

Template Name: The file name of the template that will be used to build calibration certificates for the current device. Template files have the extension CTF - Certificate Template File.

Template PDF: If a calibration certificate already exists, this is the file name of the certificate. (Calibration Toolbox ADO stores all certificates as PDF files that can be opened in applications such as Acrobat Reader.)

If you are running the unregistered evaluation version of Toolbox ADO, these files will already have been created. For registered versions, you will have need to create the template, and built a certificate for any information to be shown. The template indicated is shown in fig 22 below.
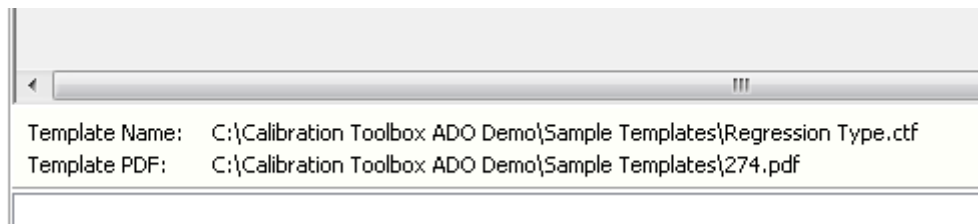

Fig 20:   Template Name and Template PDF

If you have a valid certificate template specified, then clicking the 'Build' button, as shown in fig 21, will display a preview of your new certificate. If no certificate template was specified in the calibration data template, a file dialogue box will appear enabling you to select a template yourself.
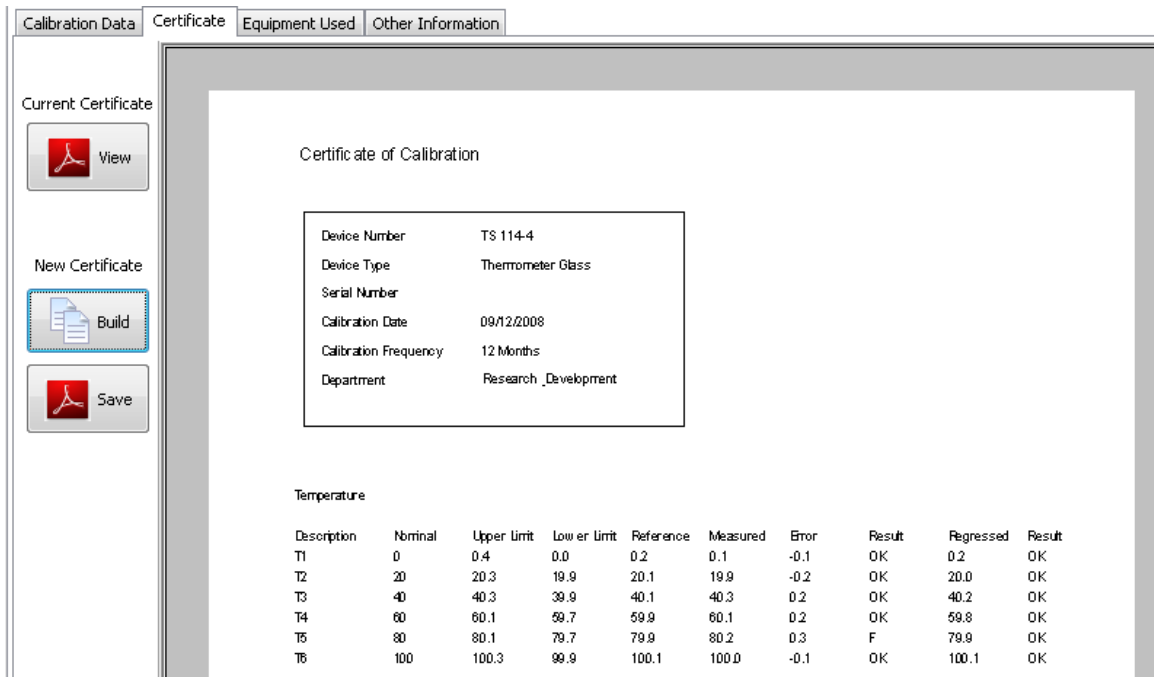

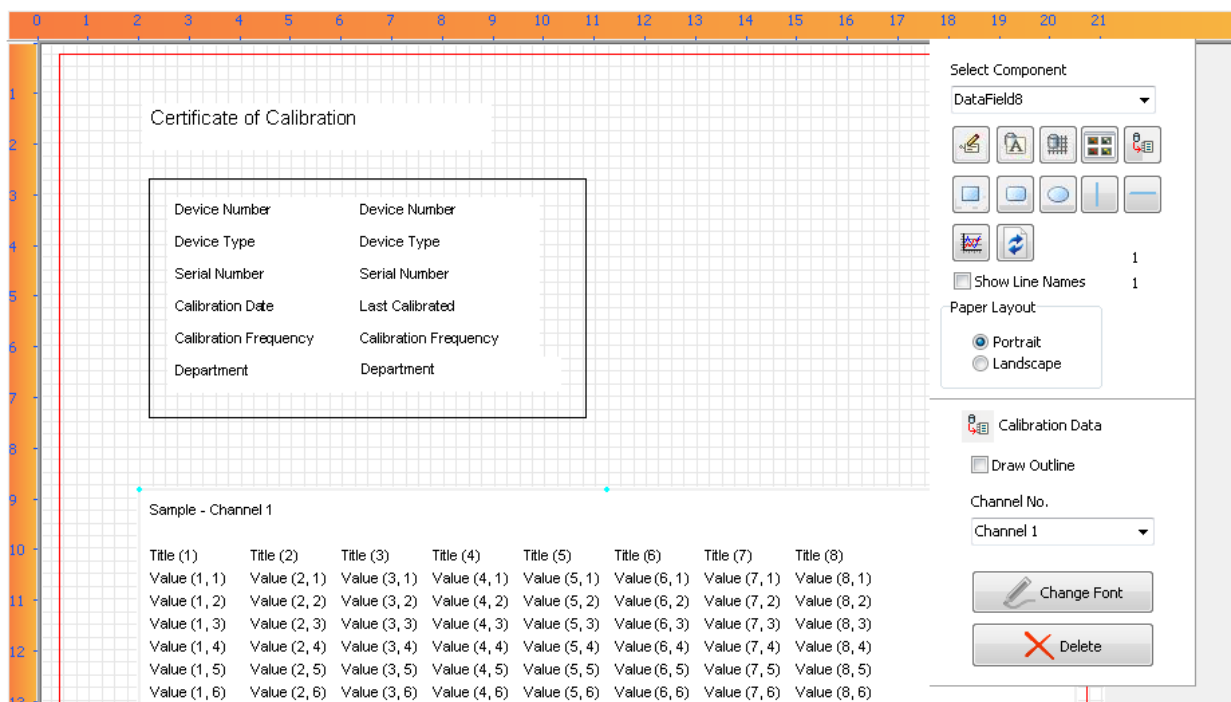Fig 21:   Previewing a New Calibration Certificate

Fig 22:   The Template that was Used to Build the Certificate

When you are happy with your certificate, click the 'Save' button to save the template as a PDF document.

Assuming that you have correctly built your certificate and saved it as a valid PDF file, clicking the 'View' button, as seen in fig 21will open your certificate in it's default application (usually Acrobat Reader).
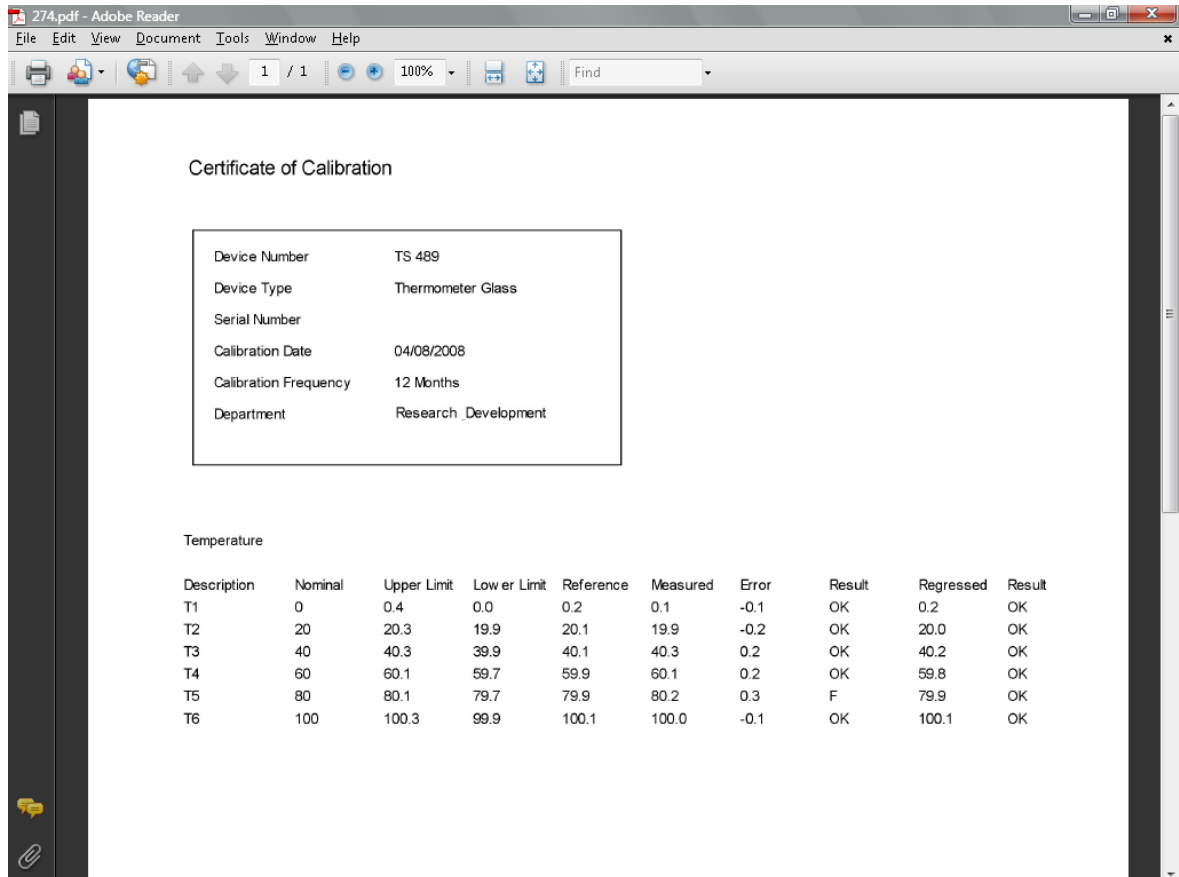

Fig 23: Viewing Your Calibration Certificate

Certificates can be viewed at any time once saved as PDF documents. Pages from a multi-page certificate will all be in a single PDF document.