



HEXAGON
MANUFACTURING INTELLIGENCE

ALPHACAM 2020.1 REPORTS



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Conventions used in this manual

To enable you to use the information in this guide effectively, you need to understand the conventions used in the guide to represent differing types of information.

- Buttons on the screen are represented as the button text in square brackets.
For example: Click on **[OK]**.
- Keys on the keyboard are represented as bold lettering in between **< >** characters.
For example: Press **<Enter>**.
- Ribbon Tab options are represented as a path with the Ribbon Tab in **UPPER** case with sub menus Capitalised and separated with an arrow
For example: Select **FILE > Open**.
- Field names are represented as bold text. And the value to be entered will be represented by Bold Text.
For example: Enter the value **50** in the **Offset** field. Or
When prompted for the X & Y values type **100,50 <Enter>**



Denotes a **<LClick>** or Primary Mouse Button Click.



Denotes a **<RClick>** or Secondary Mouse Button Click.



This is a note. It contains useful or additional information.



This is a reference. It directs you to another part of the user guide.



This is a thought box. It is generally used in exercises and contains a question for you to consider.



This is a highlighted note to emphasise information



This is a warning; it contains information that you must not ignore.



This is a tip. It is generally used in exercises and offers further advice.

1. This is the first line of a number list item
 2. This is the second item of the numbered instructions, which you must
 3. Follow in sequence.
- This is a list
 - of items, in which
 - The order is not important.

Recommended Operating Systems and Hardware for ALPHACAM

Supported Operating Systems

- **Operating System**
- **64bit** operating systems of the following list are supported,
 - **Windows 7** (Professional, Enterprise or Ultimate) SP1 required,
 - **Windows 8.1** Professional and Enterprise,
 - **Windows 10** Professional and Enterprise.
- ALPHACAM will install and run on the 'Home' editions of the above operating systems. However, this is not recommended, and we cannot guarantee to fix any ALPHACAM issues specifically related to these operating systems.
- Nvidia or ATI Open GL Graphics Card with 1Gb dedicated memory



We recommend you keep up to date with the with the [latest Software Updates](#) for the supported operating systems and drivers for your hardware base.



Any Windows Operating system (OS) prior to and including Vista, is not a supported operating system.

ALPHACAM Minimum Specifications



The latest minimum specification can be found at <http://www.alphacam.com/systemrequirements>

This minimum specification is to run any **Alphacam Essential** module, you will need to considerably increase the specification if you are working with solid models and producing the NC code for 3D machining and 3, 4, or 5 axis simultaneous machining strategies.

Your minimum specifications should be the fastest processor with the most memory and the highest specification video card that your budget will allow.



If using Autodesk Inventor Files, please check the current Inventor View requirements at [autodesk inventor view](#)

Hexagon Customer Portal

At Hexagon, we strive to provide you and your business with first class technical support and services. The Customer Support Portal allows you the tools you need to receive the best from your software. In addition to generating new and updating existing support cases, the portal allows you:

- Unlimited user logins for your company.
- Access to all your licenses for easy reference.
- Get the latest releases and software update at the touch of a button.
- View what is available on your support and maintenance schedule.
- Reference to the Customer Support Charter at any time.
- View the status of your Technical Support cases.
- View all purchased Professional Services like Training and Consultancy.

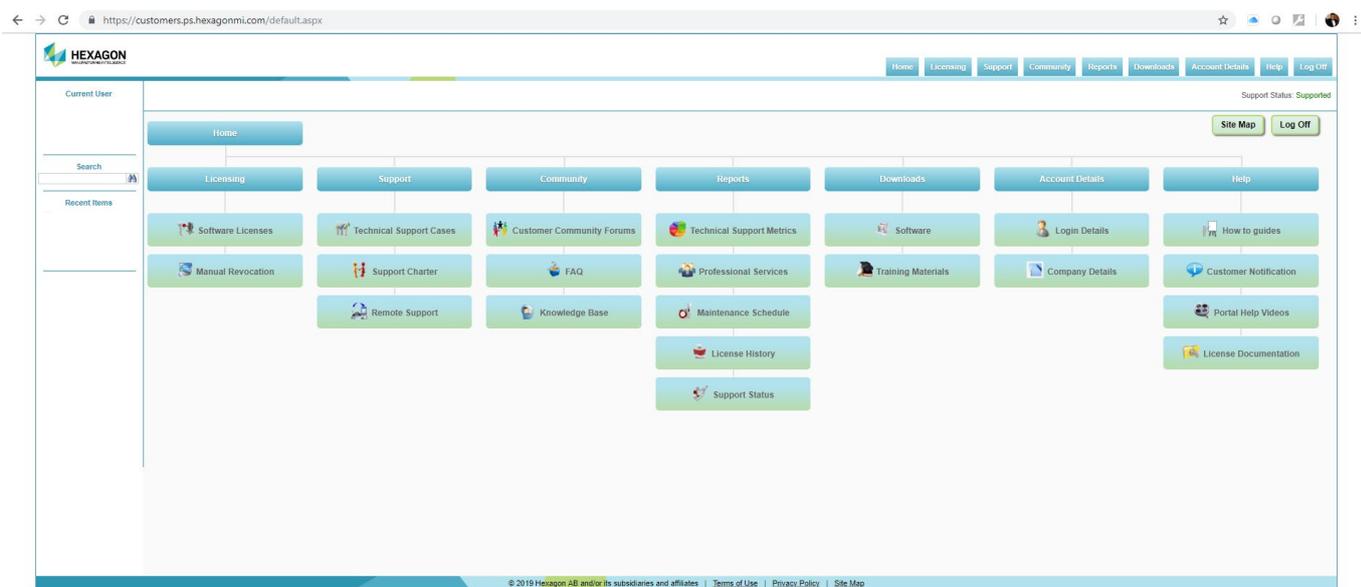
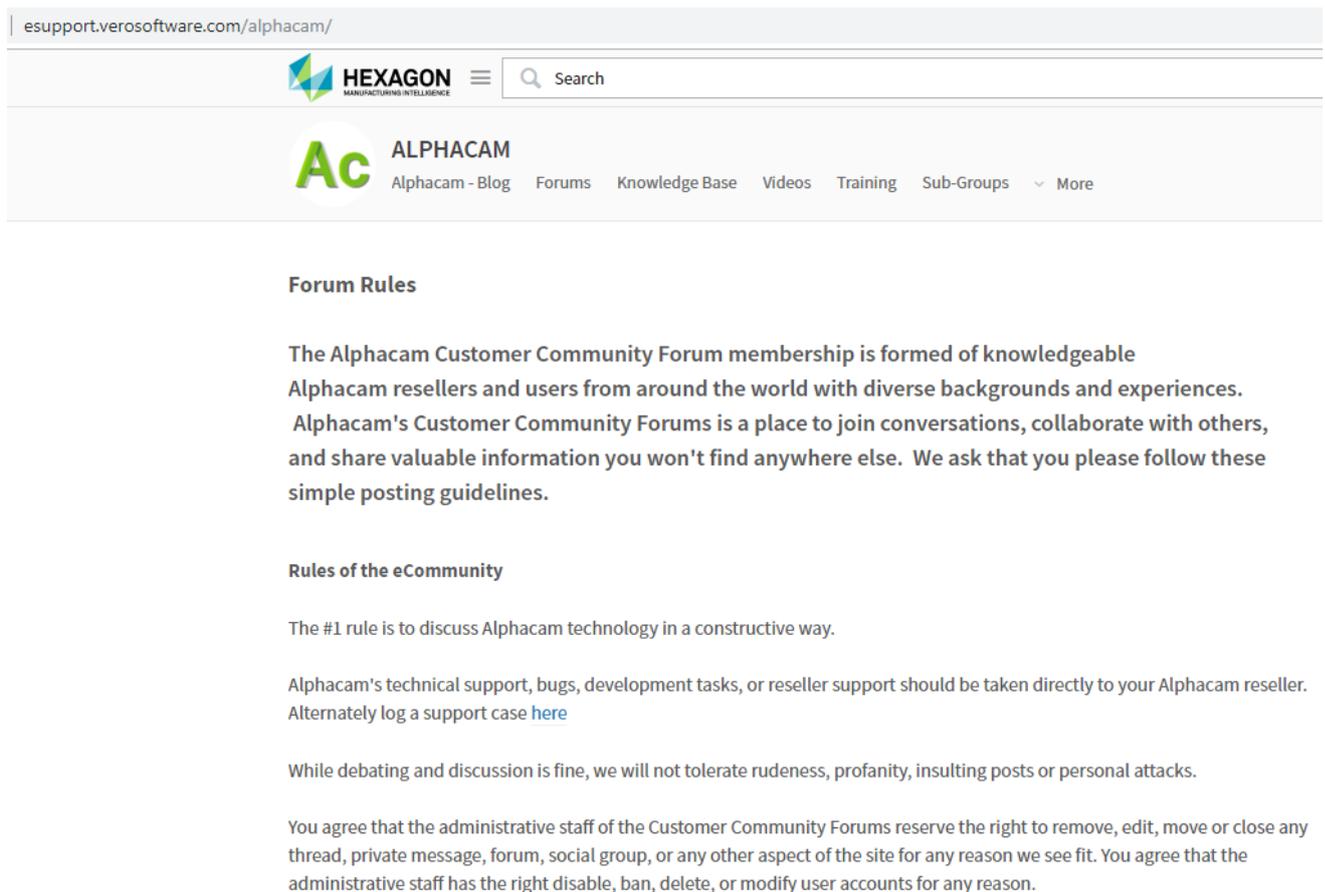


Figure 1 - Customer Support Portal

For the Hexagon Customer Portal visit customers.ps.hexagonmi.com

ALPHACAM esupport

Another location to gain valuable information about using the software or asking other experienced users for assistance are the [esupport forums](#).



The screenshot shows the ALPHACAM esupport page. At the top, there is a navigation bar with the Hexagon logo, a search bar, and a menu. Below the navigation bar, there is a section for ALPHACAM with a large 'Ac' logo and a list of links: 'Alphacam - Blog', 'Forums', 'Knowledge Base', 'Videos', 'Training', 'Sub-Groups', and 'More'. The main content area is titled 'Forum Rules' and contains the following text:

Forum Rules

The Alphacam Customer Community Forum membership is formed of knowledgeable Alphacam resellers and users from around the world with diverse backgrounds and experiences. Alphacam's Customer Community Forums is a place to join conversations, collaborate with others, and share valuable information you won't find anywhere else. We ask that you please follow these simple posting guidelines.

Rules of the eCommunity

The #1 rule is to discuss Alphacam technology in a constructive way.

Alphacam's technical support, bugs, development tasks, or reseller support should be taken directly to your Alphacam reseller. Alternately log a support case [here](#)

While debating and discussion is fine, we will not tolerate rudeness, profanity, insulting posts or personal attacks.

You agree that the administrative staff of the Customer Community Forums reserve the right to remove, edit, move or close any thread, private message, forum, social group, or any other aspect of the site for any reason we see fit. You agree that the administrative staff has the right to disable, ban, delete, or modify user accounts for any reason.

Figure 2 - esupport page

Asking a question of the community, using the knowledge base or other available information links could save you time if you have a problem that someone else may already have supplied a solution for.

Introduction

As the need for faster and more accurate programming has created ever more flexible options in ALPHACAM, a more robust and structured method of creating complimentary documentation was required. This has resulted in the development of the ALPHACAM Reports Engine.

This reporting tool will give users the opportunity to create bespoke documentation, such as nested job reports, setup sheets, tool listings and part labels from ALPHACAM generated data to better suit their needs.

Objective

The purpose of this supplement is to give the user an introduction into the basic understanding of what is available in the Reports creator and how to manipulate the differing types of data that are generated from a machined part within ALPHACAM into a presentable and usable format.

Once this grounding is in place, suitable practice time and reference to the Help file within the Reports Designer is recommended to achieve a suitable level of competence suitable for the needs of the user to assist in designing the required layouts for production documentation.

Licence Requirements

To allow for continued designing functionality within ALPHACAM Reports, an ALPHACAM licence on maintenance support is required.

Reports

The Reports process is set up into four distinct sections, these are;

Create Reports



Creates a report based on the current active ALPHACAM drawing.

Open Report Designer



Opens the design environment to allow creation of new report layouts.

Edit Report Layout



Allows the editing of an existing layout file.

Edit Report Data Settings File



Allows the editing of an existing data file used to drive a Report.

These commands are located in the **HOME > Reports** ribbon section.

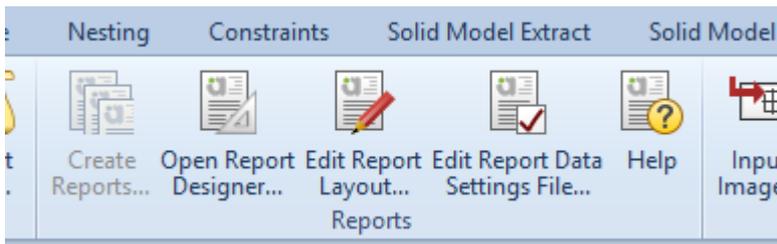


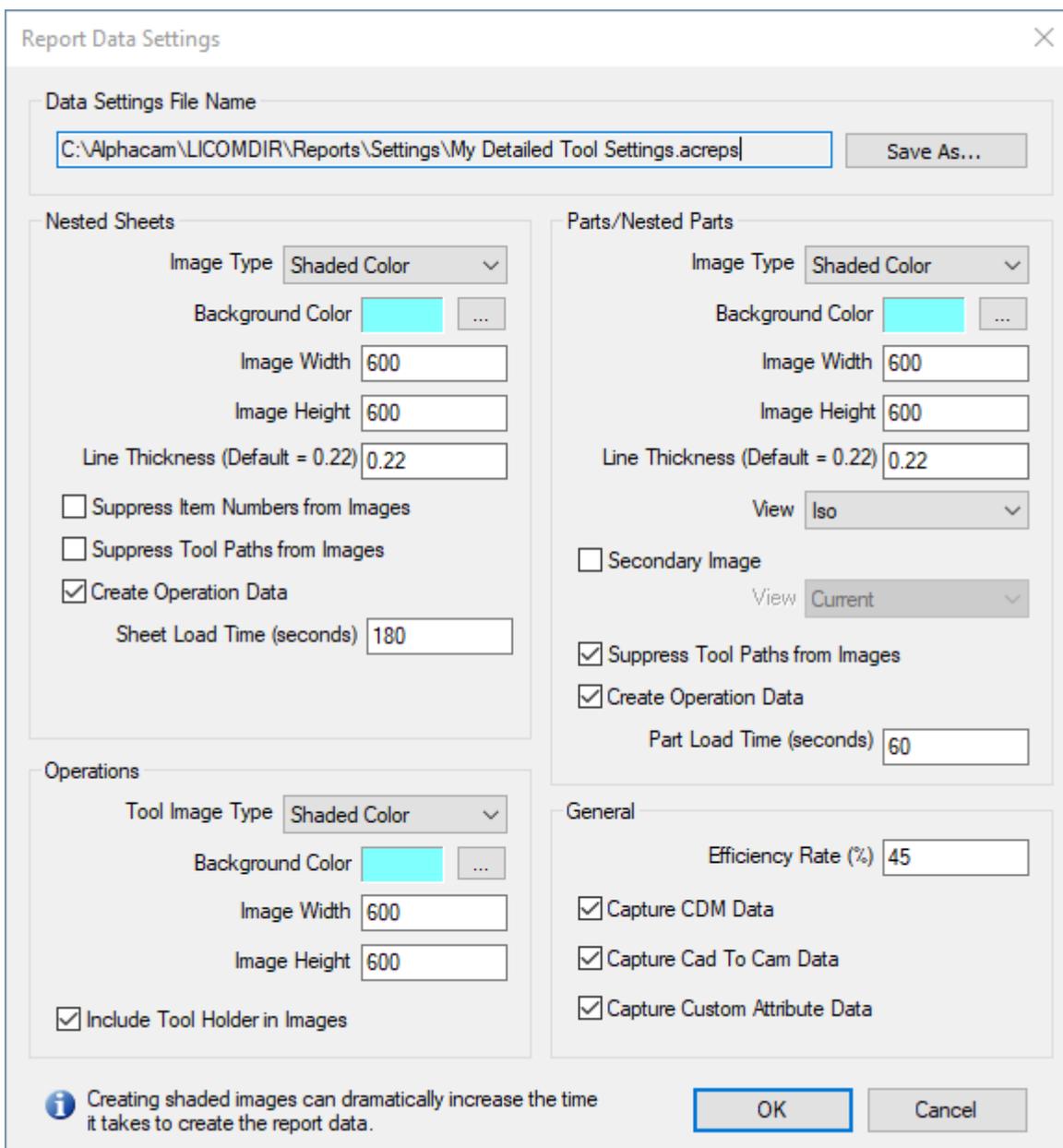
Figure 3 - Location of Reports commands

There is also a comprehensive Help file that covers more of the advanced options available in the Reports design and use as well as the basic elements covered in this supplement.

Report Data Settings

All reports need to have a specific data file linked to them to allow manipulation of images within the final report layout.

Using the command **HOME > Reports > Edit Report Data Setting File** , navigate to “.....ALP TRG 112 2D Machining 2020 \ Examples\ Reports\ Settings” and <2LClick> on the file “My Settings.acreps”



The screenshot shows the 'Report Data Settings' dialog box with the following configuration:

- Data Settings File Name:** C:\Alphacam\LICOMDIR\Reports\Settings\My Detailed Tool Settings.acreps
- Nested Sheets:**
 - Image Type: Shaded Color
 - Background Color: Cyan
 - Image Width: 600
 - Image Height: 600
 - Line Thickness (Default = 0.22): 0.22
 - Suppress Item Numbers from Images
 - Suppress Tool Paths from Images
 - Create Operation Data
 - Sheet Load Time (seconds): 180
- Parts/Nested Parts:**
 - Image Type: Shaded Color
 - Background Color: Cyan
 - Image Width: 600
 - Image Height: 600
 - Line Thickness (Default = 0.22): 0.22
 - View: Iso
 - Secondary Image
 - View: Current
 - Suppress Tool Paths from Images
 - Create Operation Data
 - Part Load Time (seconds): 60
- Operations:**
 - Tool Image Type: Shaded Color
 - Background Color: Cyan
 - Image Width: 600
 - Image Height: 600
 - Include Tool Holder in Images
- General:**
 - Efficiency Rate (%): 45
 - Capture CDM Data
 - Capture Cad To Cam Data
 - Capture Custom Attribute Data

At the bottom, there is an information icon and a note: "Creating shaded images can dramatically increase the time it takes to create the report data." Buttons for 'OK' and 'Cancel' are also present.

Figure 4 - Report Data Settings dialogue options

Sections

The dialogue is split into five sections, each having their own options for the data that will be displayed in the images.

Though the sections are separate entities the descriptions of the options are common.

Data Settings File Name

Name and file location of the data setting file currently open.

Nested Sheets

Deals with the specific requirements applying only to the full sheet options when nesting.

Parts/Nested Parts

Deals with the information related to an individual item as a standalone part or a part within a nest.

Operations

Supplies the image information for each individual tool used in an operation as listed in the Operations tab of the Project Manager.

General

Allows you to adjust the efficiency of the output from ALPHACAM so that the times generated on the report match the actual times on the machine.



A series of tests is recommended to allow accurate times to be calculated. Creating a simple part in ALPHACAM, running it on the machine and then comparing the Report time against the real machining time. Then, using the percentage adjustment option, fine tune the information.

Options

Image Type

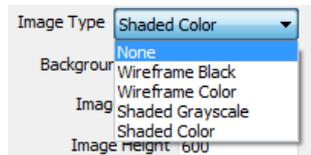


Figure 5 - Image Type drop down

Allows a choice of image options from None, (no image), to full Shaded Colour images.

Background Colour

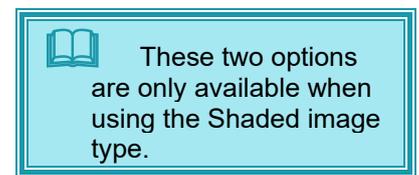
Clicking on the selection dots opens the standard Windows colour palette selection tool.

Image Width

Use to manipulate the width of an image in the report

Image Height

Use to manipulate the height of an image in the report



View

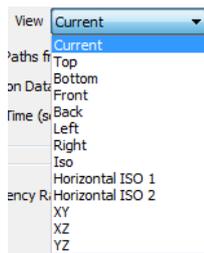
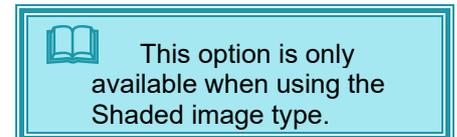


Figure 6 - View Type drop down

Allows you to select a specific view orientation for the image. You can only have a single view option per report.



Suppress Item Numbers from Images

Removes the Item Number overlay that appears in a nested sheet. Applies to the Nested Sheet options only.

Suppress Tool Paths from Images

Removes any Tool Path indicators from an image used in the layout.

Create Operation Data

Creates the operation data associated with the section ticked. Depending on the report required, a nested sheet may only require Operation Data from the single nested part and not the entire sheet. A non-nested report would require only the part operation Data.

Sheet/Part Load Time (seconds)

Allows the addition of any loading times that will be included in the complete time of the report.

Tool Image Type

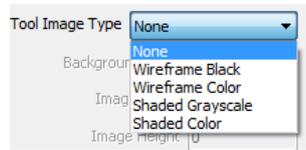


Figure 7 - Tool Image Type drop down

Allows a choice of images options from None, no image, to full Shaded Colour images.

Include Tool holder in Images

If ticked and you have defined Tool holders on any tooling, these will be included in the images.

Efficiency Rate (%)

Adjusting the % rate will fine tune the report times to match the actual real world times on the machine.

Notes

Depending on the type of reports that you wish to create, you may have only a single data file if you are only creating Tool Listing.

More will be needed to generate Nesting layouts and the associated Labels that may be required.

All you need to remember is that you can only have a single Data file attached to a Report.

If you need to use multiple Data files, you will need to generate multiple Reports.

File Types and Default Locations

There are three files extensions used in Reports.

- Data Settings use the ***.acrepd** extension and the default location for these files is “...**LICOMDIR \ Reports \ Data**”.
- Report Settings use the ***.acreps** extension and the default location for these files is “...**LICOMDIR \ Reports \ Settings**”.
- Report Layouts use the ***.acrepx** extension and the default location for these files is “...**LICOMDIR \ Reports \ Layouts**”.

Report Design

The Report Designer allows you to modify a generated report from the current ALPHACAM drawing file, a previously saved report or design a Report Layout from scratch.

Back Up

To learn the basics of Report Design it is better to edit an existing supplied layout until you become confident in the tools and options available.

Make sure you create a copy of any of the supplied templates so that you can always have an original to revert back to.

User interface

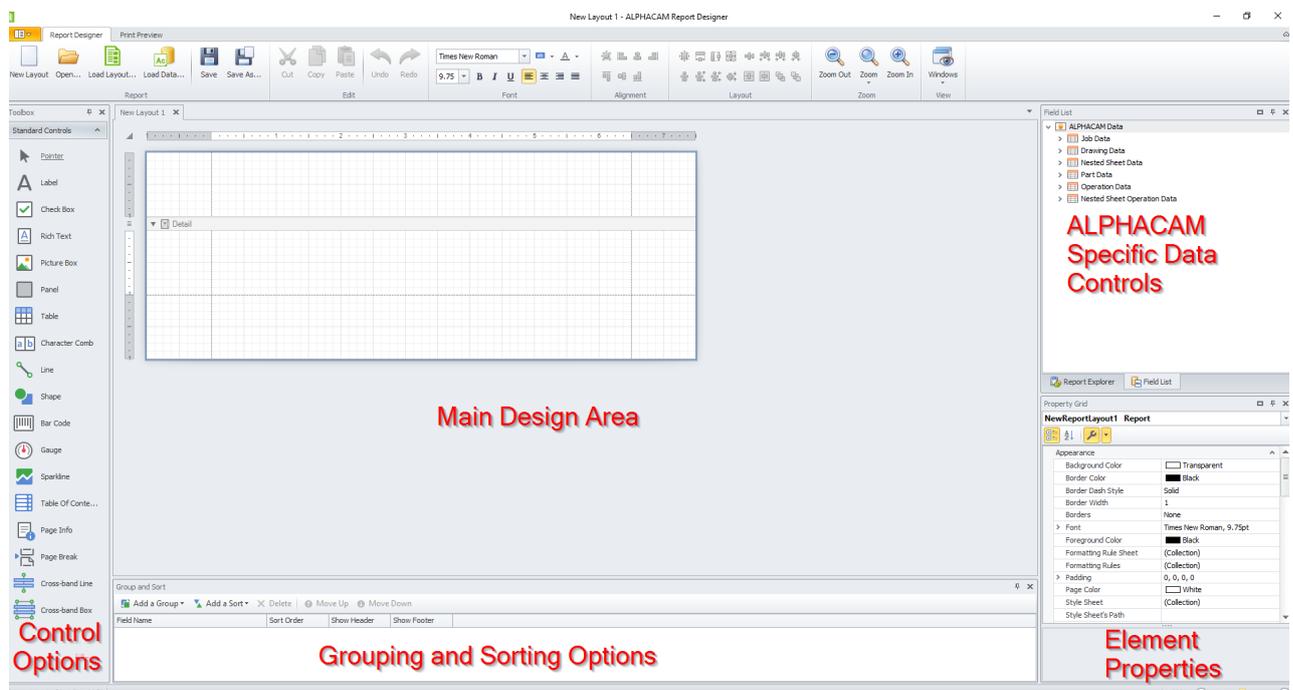


Figure 8 - Report Designer Interface

The basic principles behind the **Report Designer** is simply to locate the items you wish to use from either the **Control Options** section on the left side of the image above or the **ALPHACAM Specific Data Controls** on the right side, then drag & drop them to the required location within the design.

Within the **Main Design Area** there are inbuilt controls that will automatically show you the alignment of one item to another so that you can very quickly and easily line up description elements with data elements, or images with titles.

This can save you a lot of time and remove some of the frustration associated with document design.

Basic Structuring

The Reports designer allows you to set out the report in any style that you would wish to use, however there are a few basic rules that should be followed.

- Work in sections.
- Keep it easy to follow.

A Report needs to have a structure; this structure is created using **Report Bands** these separate areas of information from each other and will save you time and effort if you need to repeat, or more often, not repeat information through a report.

Using the command **HOME > Reports > Edit Report Layout** , navigate to “.....ALP TRG 112 2D Machining 2020 \ Examples\ Reports \ Layouts” and <2LClick> on the file “My Report Bands.acrepx”

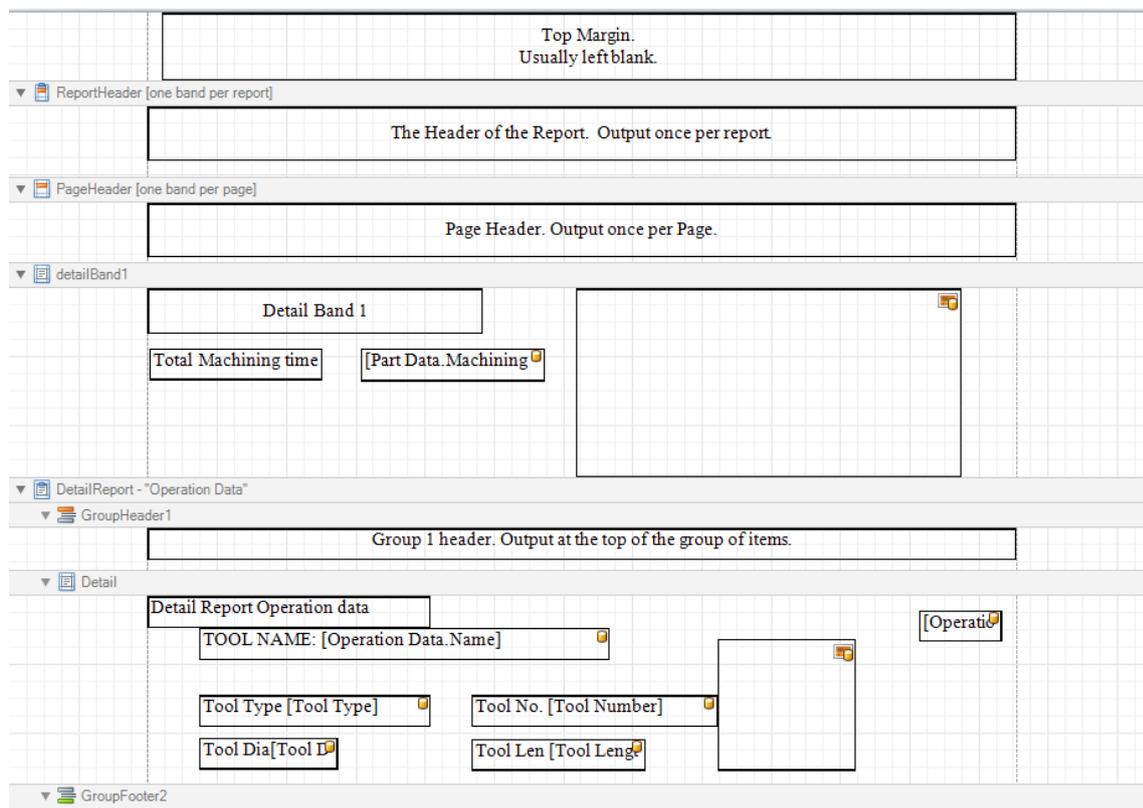


Figure 9 - Sample Report Band structure

This example file shows how a Report can be structured so that you can apply controls to specific items, for example, if you only need certain information placing once in the entire report it should be placed in the **Report Header** section.

If you need information at the start of every page of a multi-page document, place this in the **Page Header** section.

The structure is all personal preference, but remember, it needs to convey detailed information clearly to the people who need to read it.

Simple Tooling List

Probably the first and most important report you may wish to create will be a listing of the tooling required for a specific job.

In this exercise, we will start from a blank design and create a list of tooling for the example part for this course.

To test the report design as we work, the example file needs to be open in ALPHACAM so that the report can reference the tools.

Use **FILE > Open**  and navigate to “.....ALP TRG 112 2D Machining 2020 \ Examples\ Reports\ Drawings\” and open the **Reports Example File**.

Once the file is loaded, use **HOME > Reports > Open Report Designer** 

You may wish to alter the Zoom of the report design from the standard 100% as this is a small area to work on at this stage.

Use the Ribbon command Zoom to access the size specific options or use the Zoom In or Zoom Out options if you prefer.

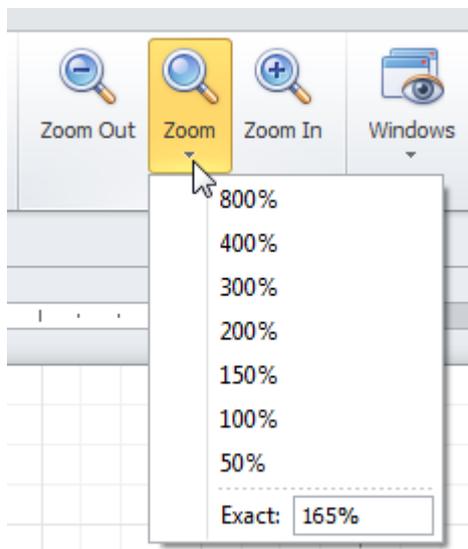


Figure 10 - Zoom Options

The blank design at present only has the **Top Margin** and the **detailband1**. Our first creation process will be to add in the actual **Report Bands** to layout the design correctly.

Report Bands

Report Header

In any of the existing Report Bands, **<RClick>** and from the pop up menu use **Insert Band > ReportHeader**.

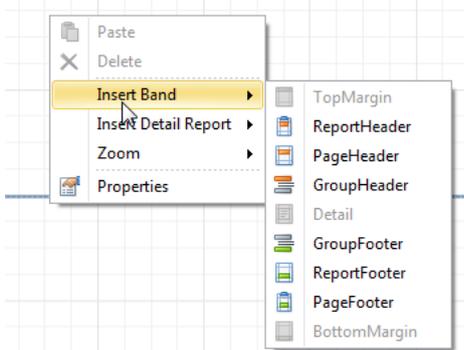


Figure 11 - <RClick> pop up menu options for Report Band creation

Report Footer

In any of the existing Report Bands, **<RClick>** and from the pop up menu use **Insert Band > ReportFooter**.

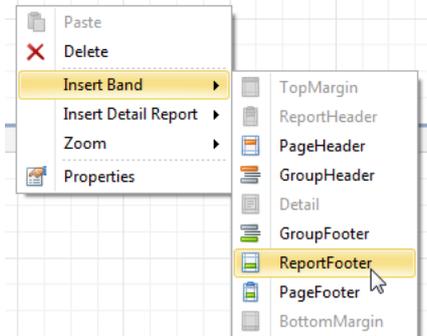


Figure 12 - Inserting a Report Footer

Operation Data

In any of the existing Report Bands, **<RClick>** and from the pop up menu use **Insert Detail Report > "Operation Data"**.

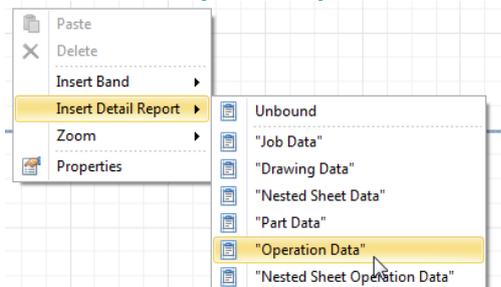


Figure 13 - Inserting a dedicated Report section

Notice that the location of the mouse when you **<RClick>** does not matter, the bands are placed in the correct location.

Resize Margins

Any band can be resized vertically by placing the mouse over the bottom divider of the band until it turns to the symbol below, then **<LClick>** and hold to drag the band thinner.

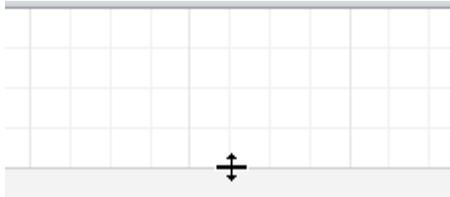


Figure 14 - Manipulating band sizes

Resize the Top Margin so that it is only two squares high.

Alter the **ReportHeader** and **ReportFooter** so that they are four small squares high.

Resize the **detailband1** so that it does not appear at all.

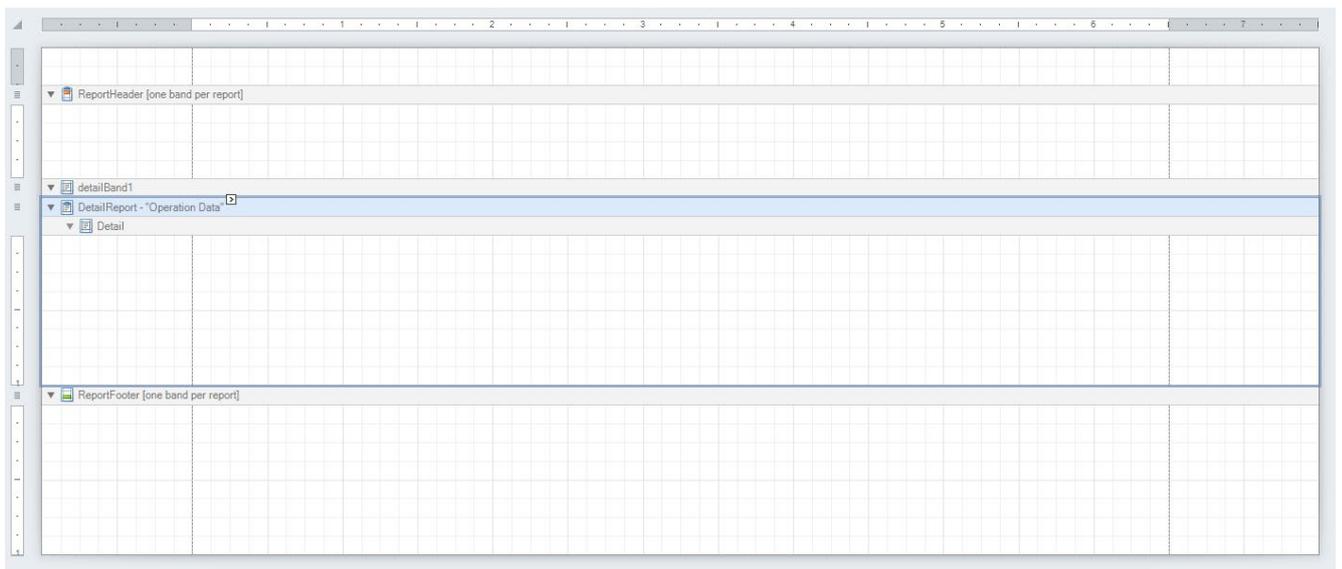


Figure 15 - altering the Report Band sizes to suit our required layout

These can all be altered as you work depending on the items added to the layout and the final Print Preview.

Data Options

In ALPHACAM Reports there are two methods of handling data that will appear in the final document.

- Static Data

This type of data is fixed and does not update regardless of the use of the report layout. Such items used in Static Data are; Title Boxes or Labels for data sections, Standard Images such as corporate logos.

- Dynamic Data

This type of data is for the information that will be pulled from the ALPHACAM drawing, Tooling Information, Layouts, Times etc.

Header Image

To add a logo image to the Report, we use one of the Static data options.

Add a Picture Box

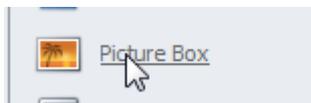


Figure 16 - Picture Box type Static Data control

From the Control options section, drag a **Picture Box** into the **ReportHeader** section.

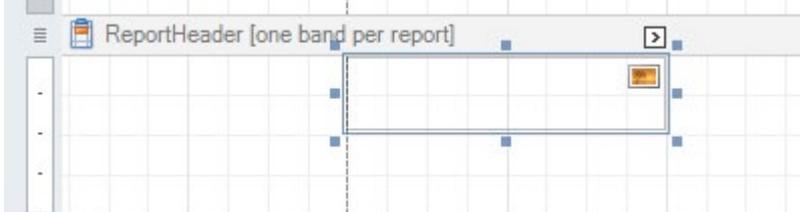


Figure 17 - Picture Box located correctly

Notice as you move the Picture Box around the section that there are guide lines to make placement easier and more accurate.

Smart Tags

To modify any added Static or Dynamic data options you will need to access what is termed **Data Bindings** via the **Smart Tag**.

This is the small arrow located to the top right corner of any added item in your report layout.



Figure 18 - Smart Tag option

Depending on the type of Control or Data item, the options within the **Smart Tag** will differ.

Add the Image

Adding an image to the Picture requires you to **<LClick>** on the Smart Tag.

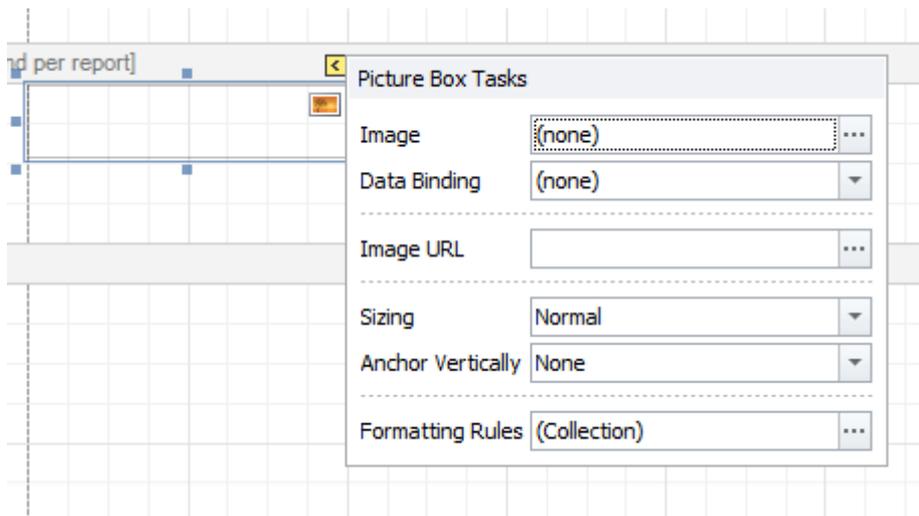


Figure 19 - Smart Tag options specific to a Picture Box

With the options differing on each style of **Smart Tag**, we will only reference those that we need to use during this tutorial.

Image URL

<LClick> on the  at the end of the **Image URL** dialogue box.

This opens a standard file browser to allow you to locate the required image.

Navigate to “...ALP TRG 112 2D Machining 2020 \ Examples\ Reports \ Images” and select the **Alphacam Colour Logo.png** file.

Sizing

Due to the size of this image you will not see anything in the Picture Box unless we resize the image.

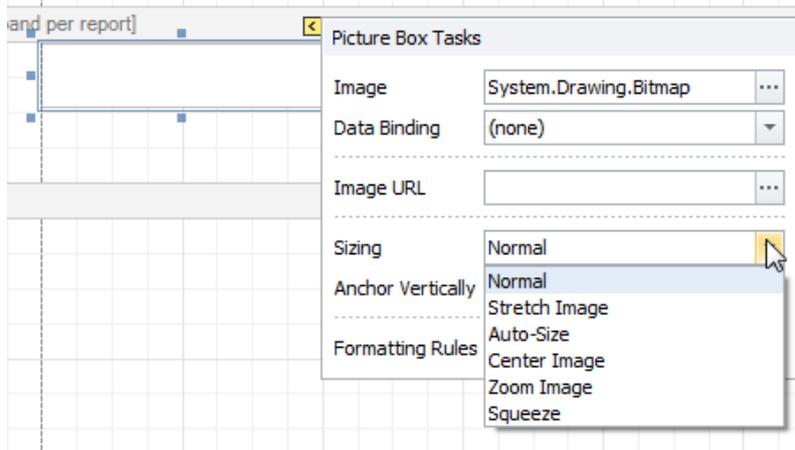


Figure 20 - Smart Tag picture size options

The options for sizing are;

Normal	Leaves the image at its original dimensions.
Stretch Image	Forces the image to fit along the length of the Picture Box, this may cause distortion on some images.
Auto-Size	Re-sizes the Picture Box to suit the actual image size.
Center Image	Moves the image centre to the Picture Box centre, does not re-size.
Zoom Image	Fits the image within the Picture box and maintains aspect ratio.
Squeeze	Fits the image to the Picture Box but will possibly distort the image.

Select the **Zoom Image** option.

Resize Picture Box

To make the new image more visible, **<LClick>** on hold the bottom left corner of the Picture Box.

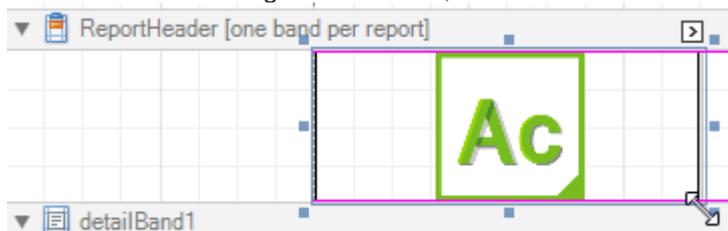


Figure 21 - Applied image in Picture Box after applying the correct options

Part Name

To identify the Report, it is advisable to have the name of the part or some other unique item contained on the final document.

To this end we will add the Name of the part. This is the exact name of the file as it is saved.

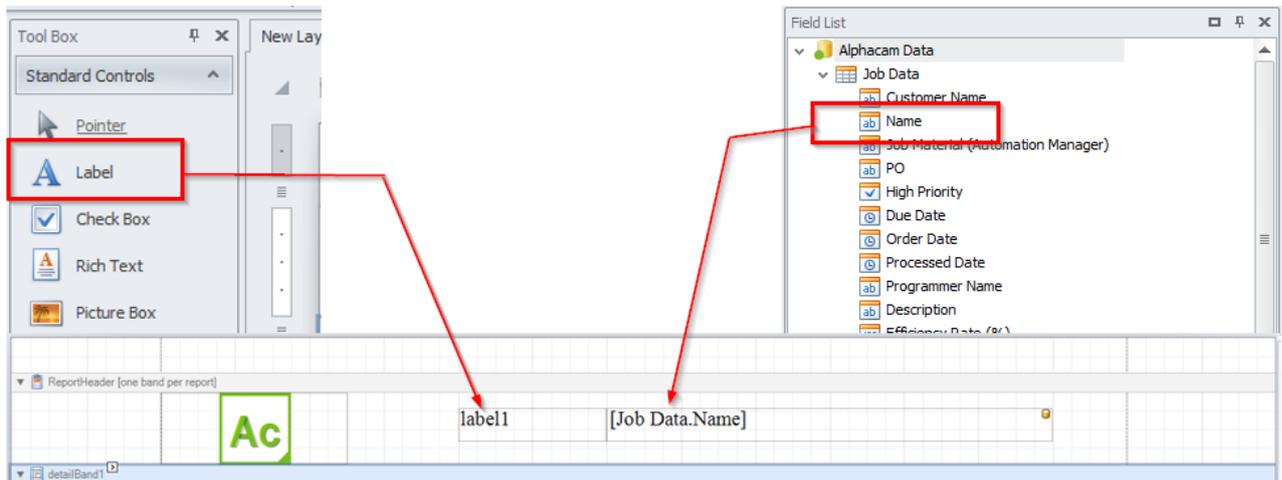


Figure 22 - Assigning a Static Data option and a Dynamic option

From the **Alphacam Data Controls**, expand the **Job Data** section, then drag then **Name** data control into the Report Header, do the same for the **Label** from **the Control Options** section.

Position them as you want.

Edit the Label so that it reads Job Name by **<2LClick>** in the Label box and typing over the existing data.

This is another way of editing; you could use the Smart Tag option as well to alter the name in the Label which is present in the **Text** section, shown here as **Job Name**.

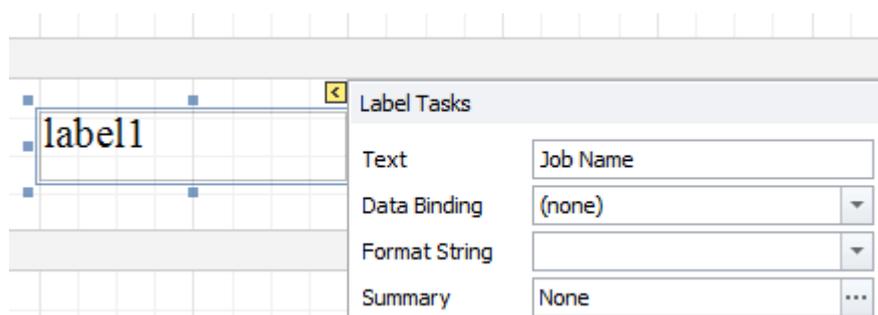


Figure 23 - Altering label2 to read correctly as Job Name

Save

At present, we can test the Report layout by simply switching to the Print Preview Tab.

As we now wish to add tooling data to the report layout, we need to use this new document to generate a report, then we can see the real time edits happen as we make them.

Use the **Save As** option from the Ribbon.

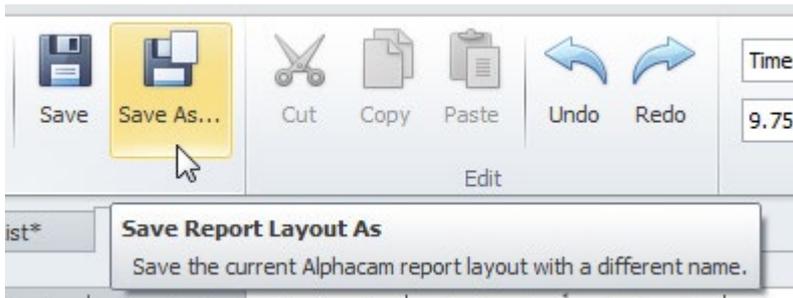


Figure 24 - Saving options

Save the file to “...ALP TRG 112 2D Machining 2020\ Examples\ Reports \ Layouts” and call it **My New Tool List**.

Adding Tooling Data

Using the command **HOME > Reports > Edit Report Data Setting File** , navigate to “.....ALP TRG 112 2D Machining 2020\Examples\ Reports \ Settings” and double <LClick> on the file “My Settings.acreps”

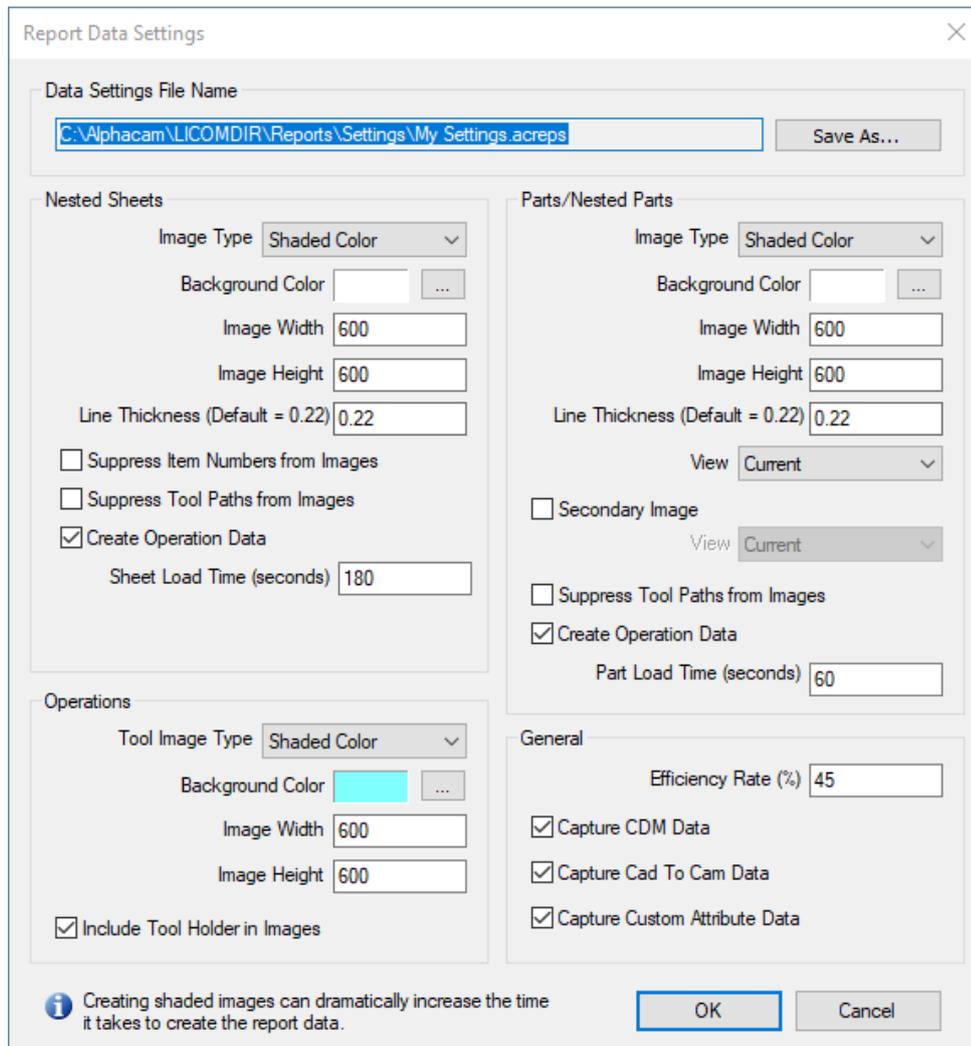


Figure 25 - Adding Tool Images to the Report Data file

On the original version, there were no **Tool Images** requested.

Change the **Tool Image** to **Shaded Color** and use the **Background Color** option to select a suitable option from the palette.

The **Image Width** and **Height** will dictate the size of the image of the tool in the report; make these values 600 in each. Remember that you can alter these to suit once the layout is assembled and you wish to fine tune it.

<LClick> [OK] to continue.

Apply the Layout

In ALPHACAM now use the command **HOME > Reports > Create Reports**

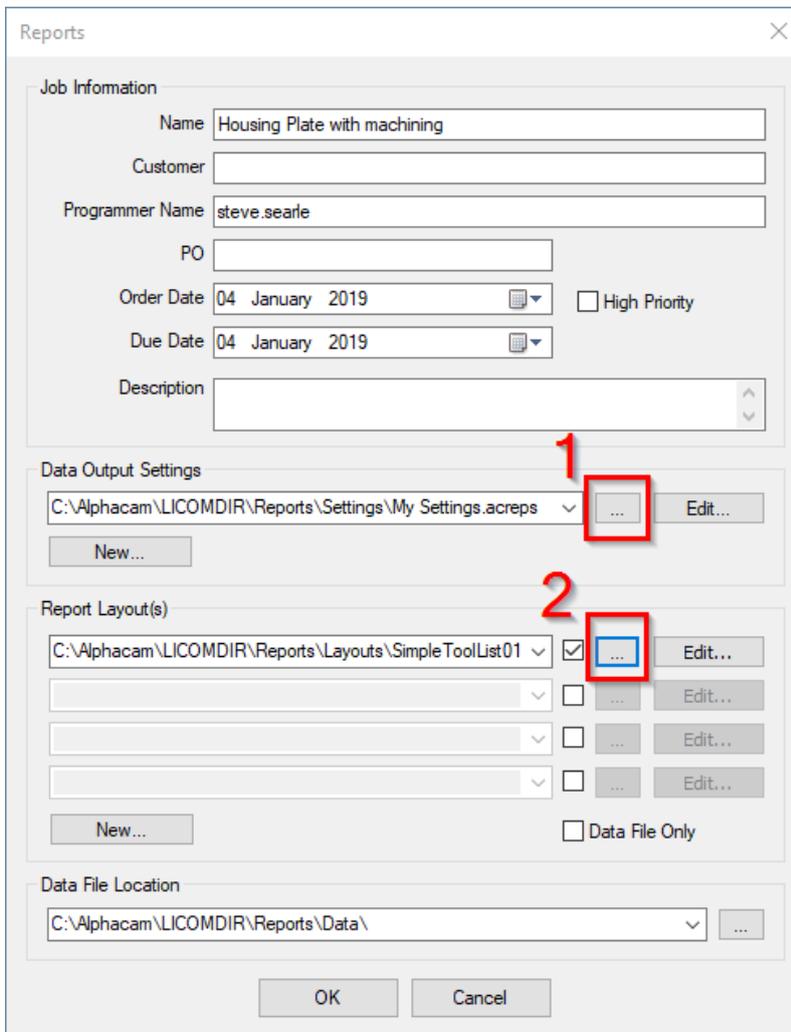



Figure 26 - Output Settings options dialogue

<LClick> on the file locator button underneath the number 1 in the image above and make sure that the Data file being used is **My Settings.acreps** as looked at earlier.

Do the same for the button above number 2 in the image and point to your **My New tool List.acrepx** layout file.

The report opens and you will be able to view everything that you have created so far, the corporate image and the title of the Report.

Now we need to look at adding the tooling information.

Having the report layout as the current active item will allow you to view the real time alterations and additions and makes layout creation much easier.

Grouping

To create a well laid out report it can prove useful to group data together.

It can also be a time saving option for very long reports that visit the same data many times over, especially something like a tooling list.

To allow Grouping to work, the report layout needs to be linked or **Bound** to the relevant ALPHACAM data information.

To link the report layout, locate the small triangle to the top left of the design window.

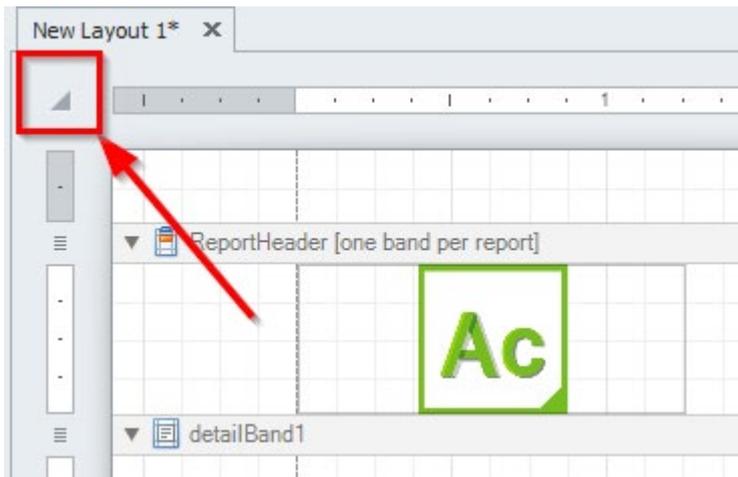


Figure 27 - Easy to miss Binding option triangle

This opens the properties of the current report and allows you to link to specific data options from the list of options available.

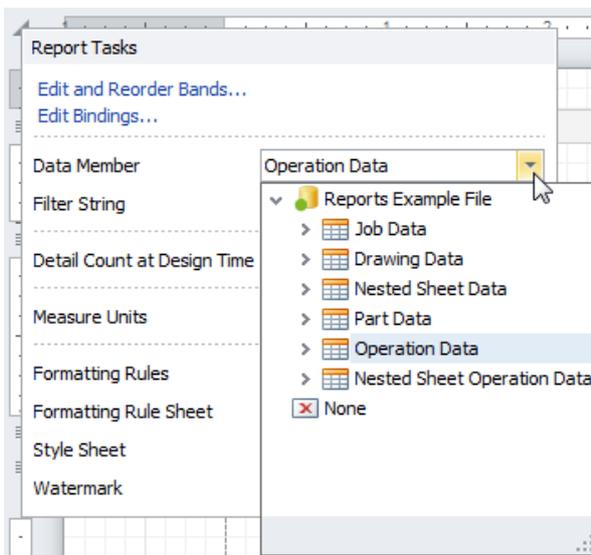


Figure 28 - Data Binding options

Using the **Data Member** drop down options, change this to **Operation Data**.

<LClick> on the section of the report layout called **detailband1**.

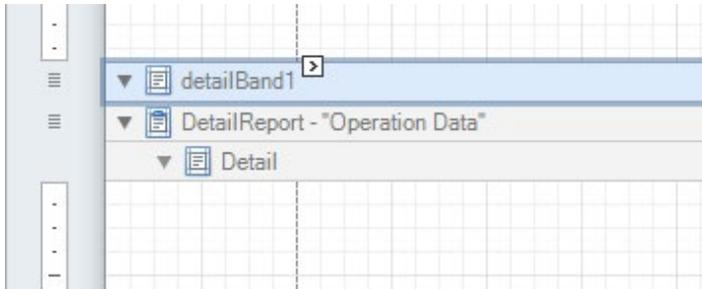


Figure 29 - Selecting the correct band

At the bottom of the Report Designer window, in the **Group and Sort** section, use the **Add Group** button and select the entry for **Tool Name**.

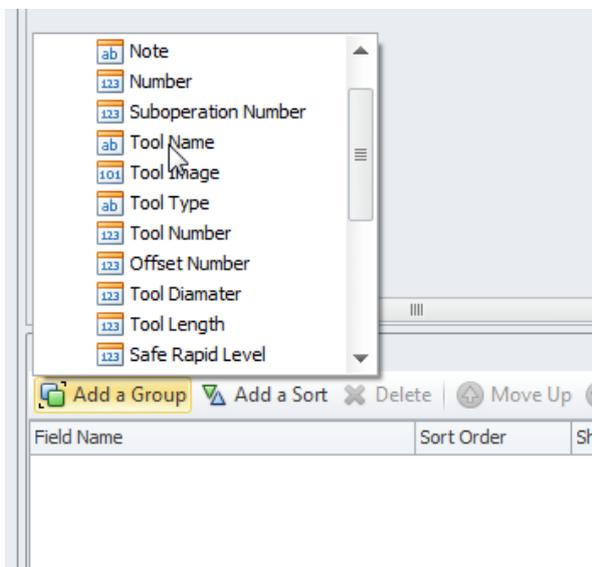


Figure 30 - Adding the Tool Name as the Group option

This will insert a new section to the report called **GroupHeader1**. This is the section that will contain the information for the tooling list.

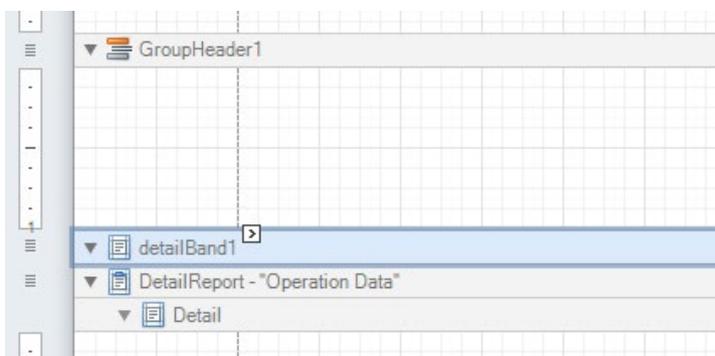


Figure 31 - Group section created

From the listing of available data for the report, drag the **Tool Number**, **Tool Name** and **Tool Image** boxes in to the **GroupHeader** section of the report.

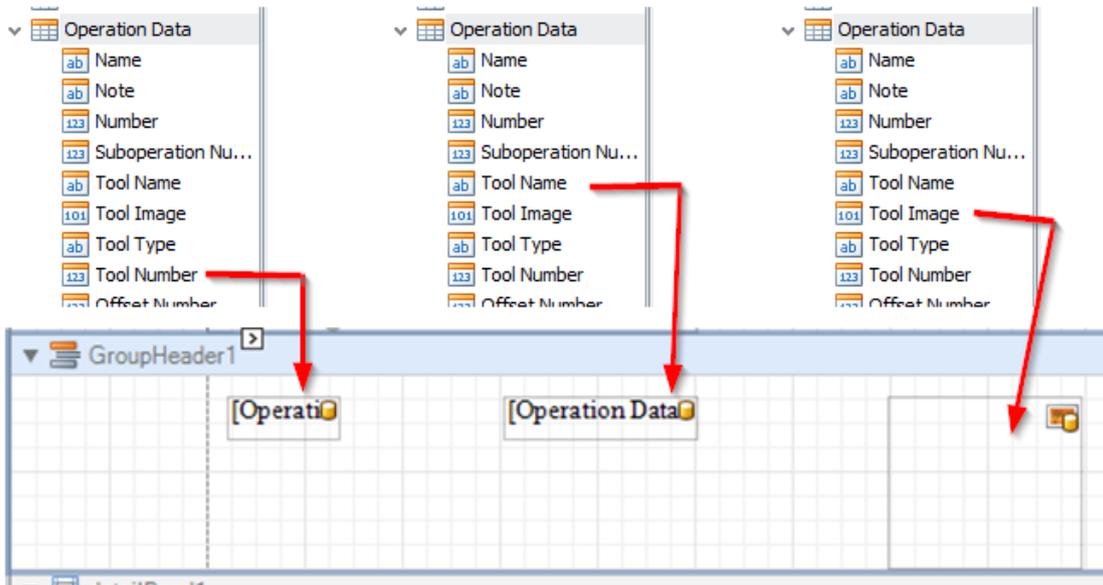
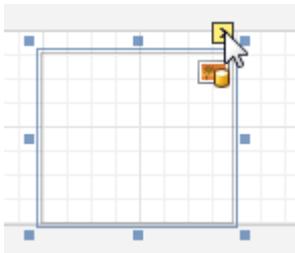


Figure 32 - Add the required data options from the Operation Data

The position of the boxes is up to individual selection and preference. The Tool image box does need to be edited using the **Smart Tag**.



Set the option for size as shown below so that the image will appear in the report correctly.

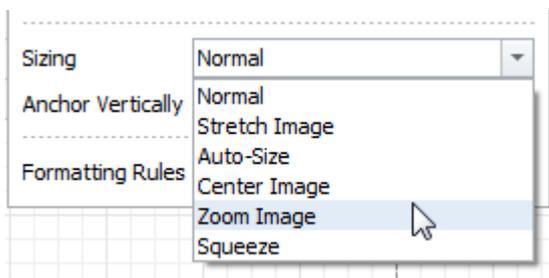


Figure 33 - Set the image properties correctly

Swapping to the Print Preview tab will show you the layout that has just been created.

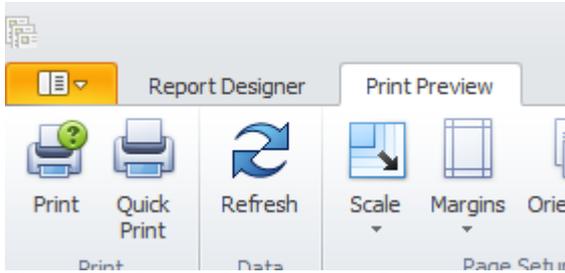


Figure 34 - Report Designer and Print Preview tabs

This is a simple style of layout that should suit any type of machining for basic information regarding tool types and number.

Ac	Reports Example File
TOOL NAME: SAWING TOOL 1 DIA 400 SAW TOOL NUMBER: 1 OFFSET NUMBER: 1	
TOOL NAME: FINISH PASS TOOL 2 END SPINDLE MOULDER TOOL NUMBER: 2 OFFSET NUMBER: 2	
TOOL NAME: ROUGHING PASS TOOL 3 SIDE PLANER TOOL NUMBER: 3 OFFSET NUMBER: 3	
TOOL NAME: ROUGHING PASS TOOL 4 SIDE SPINDLE MOULDER TOOL NUMBER: 4 OFFSET NUMBER: 4	

Figure 35 - Generated Simple Tool List

Save the report.

Detailed Tooling List

In this exercise, we will examine an existing design and look at aspects that differ from the previous tutorial and options that are available to you so that you can enhance your report with features that mean more to you. To test the report design as we work, the example file needs to be open in ALPHACAM so that the report can reference the tools.

Use **FILE > Open**  and navigate to “.....ALP TRG 112 2D Machining 2020 \ Examples \ Reports \ Drawings \ ” and open the **Reports Example File**.

As the detailed report layout contains more information than the simple tool list, we need to set up the data that will be used in the layout.

Adding Tooling Data

Using the command **HOME > Reports > Edit Report Data Setting File** , navigate to “.....ALP TRG 112 2D Machining 2020\Examples\ Reports Examples \Reports\Settings” and **<LClick>** on the file “My Detailed Tool Settings.acreps”

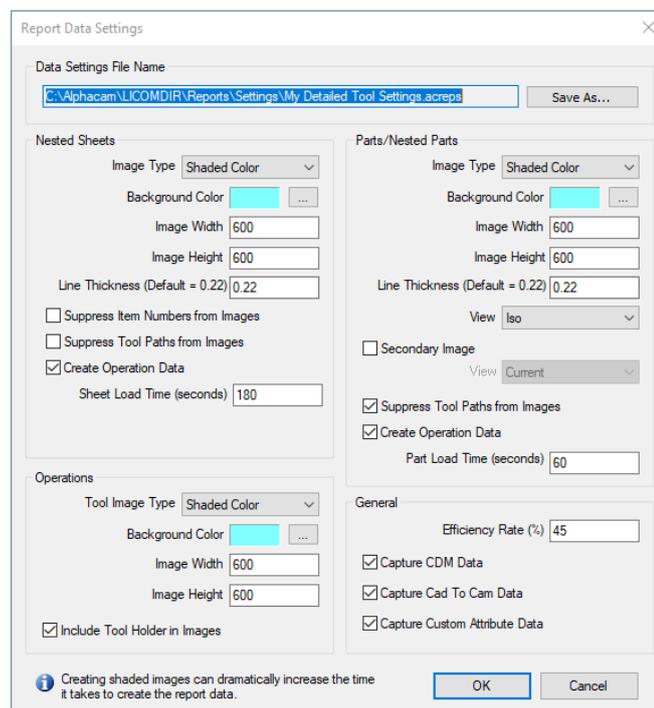


Figure 36 - Data Settings for the detailed tool list

Ensure that **Supress Tool Paths from Images** is ticked.

Set the **View** option on the Part/Nested Parts option to **ISO**.

Also, to save ink if the report is printed, make the background colours to both the **Part Image** and the **Tool Image** to white.

<LClick> [OK] to continue.

Apply the Layout



In ALPHACAM now use the command **HOME > Reports > Create Reports**

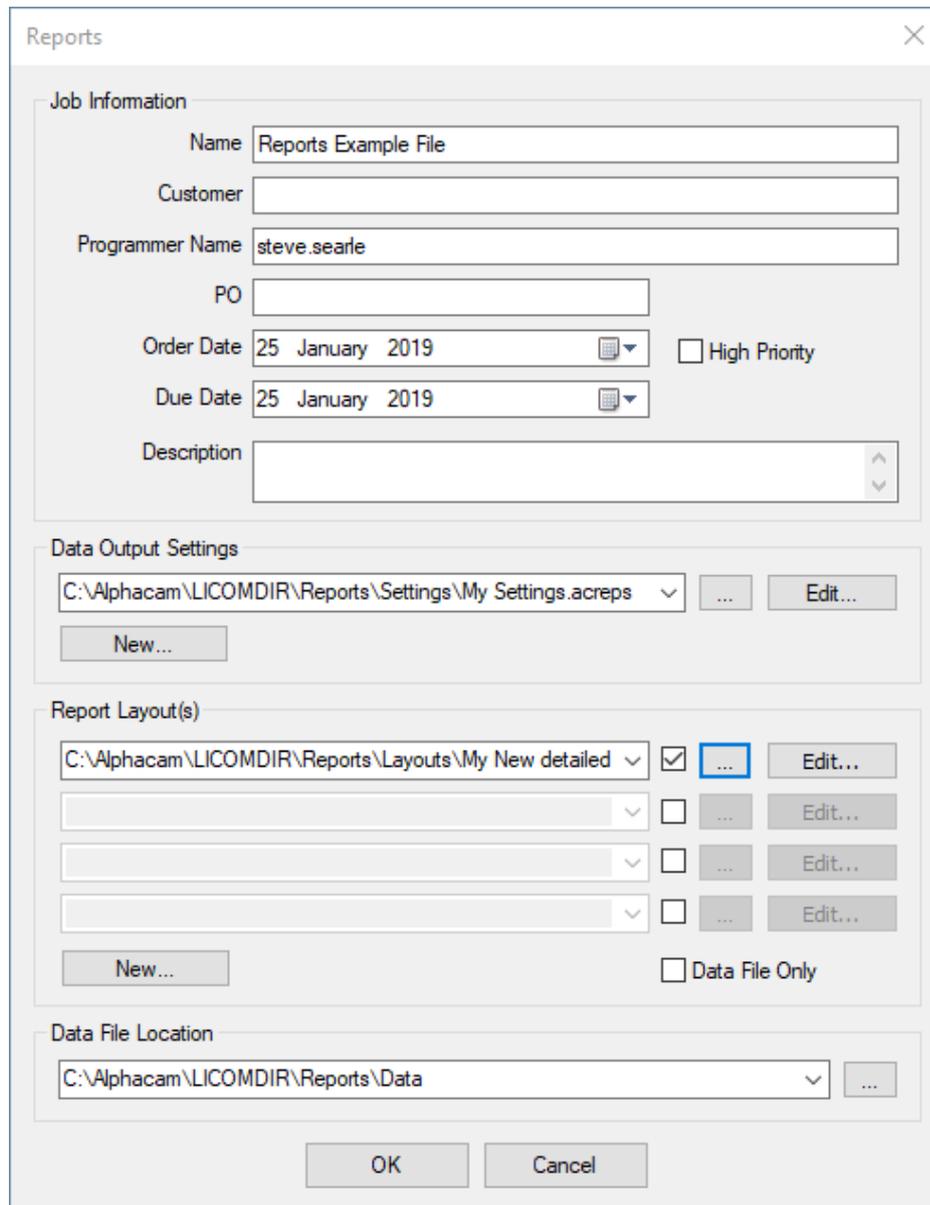


Figure 37 - Data binding and Layout options for the detailed tool list

<LClick> on the file locator button underneath the number 1 in the image above and make sure that the Data file being used is **My Detailed Tool Settings.acreps** as looked at earlier.

Do the same for the button below number 2 in the image and point to your **My New detailed tool List.acrepx** layout file.

Also, add a customer name, a programmer name and a description to the data to be used.

The report opens and you will be able to view everything that is set up in this particular report layout.

Detailed report layout for printing or viewing



Customer				
Description				
Programmed by	steve.searle	Date	25/01/2019	
Part Material	MDF			
Total Cycle Time	00:08:18			

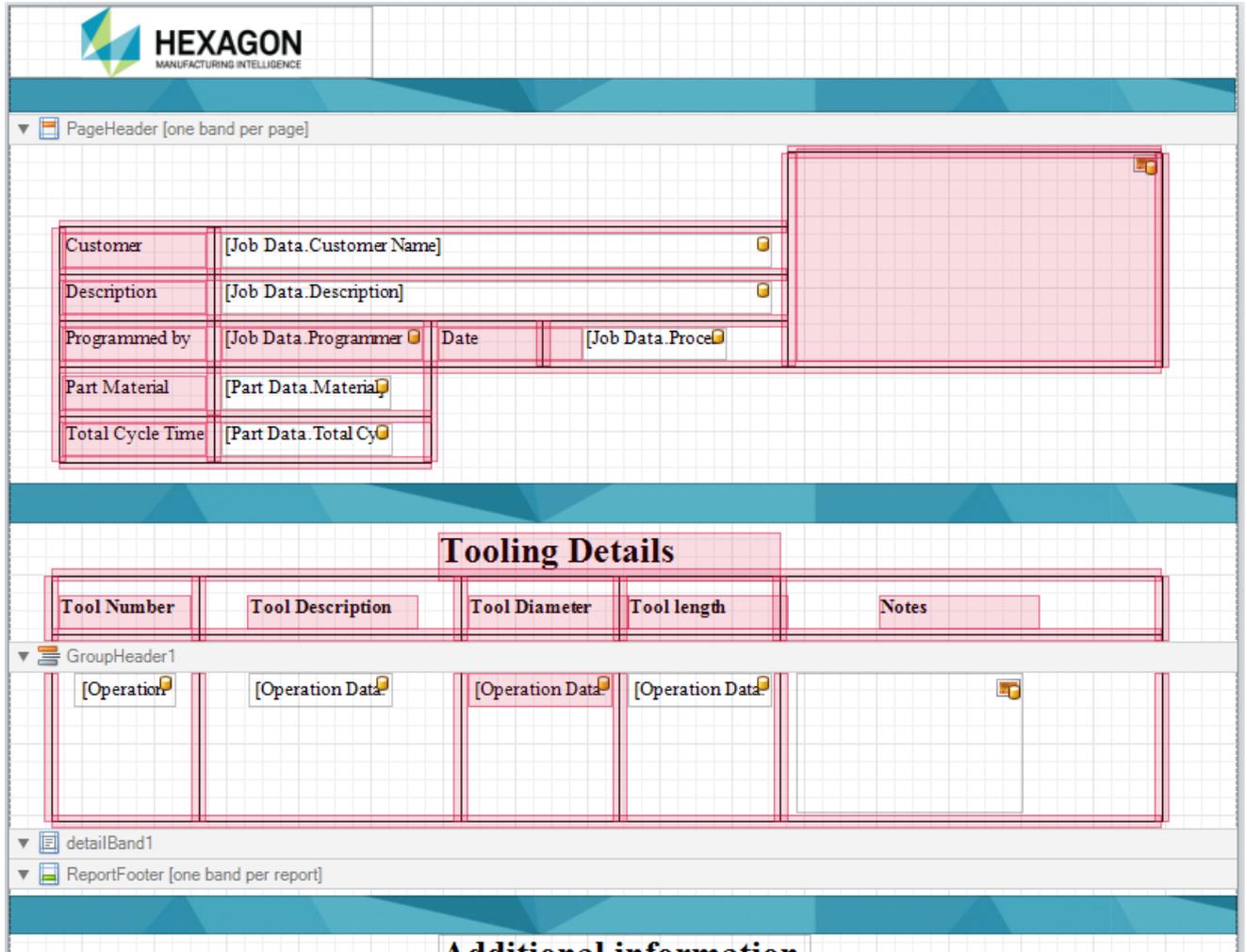
Tooling Details

ToolNumber	ToolDescription	Tool Diameter	Tool length	Notes
1	DIA 400 SAW	400.00	3.20	
2	END SPINDLE MOULDER	125.99	160.00	
3	SIDE PLANER	80.00	170.00	
4	SIDE SPINDLE MOULDER	125.99	160.00	

Additional information

Figure 38 - Layout example of a Detailed Tooling list in Print Preview

Detailed report layout for design view



The screenshot displays a report layout in Report Designer. At the top left is the Hexagon Manufacturing Intelligence logo. Below it is a 'PageHeader' band. The main content area is divided into several sections:

- Customer Information:** A table with fields for Customer Name, Description, Programmer, Date, Part Material, and Total Cycle Time, each linked to a data source like [Job Data.Customer Name].
- Tooling Details:** A table with columns for Tool Number, Tool Description, Tool Diameter, Tool length, and Notes. Below this is a data list under a 'GroupHeader1' band, with each cell containing a data source like [Operation Data].
- Additional information:** A section at the bottom of the report.

The layout uses various bands (PageHeader, detailBand1, ReportFooter) and objects (Label boxes, tables, data lists) to structure the information.

Figure 39 - Layout example of a Detailed Tooling list in Report Designer

As you can see from the image above, there are added elements in the layout to create separate sections of information using lines, title blocks to identify specific information sections or objects using Label boxes and the positioning of a complete section so that it only appears once in the entire report using the **ReportFooter** section.

Using lines

Lines can be very helpful on the final printed document, where the grid options in the designer allow for accurate positioning whilst designing a report layout, the printed document can lose focus if all the sections you create seem to blend into a single page.

Lines are added to the layout in the same manner as we added ALPHACAM information in the previous example, by dragging and dropping them in place from the Standard Controls section of the designer.

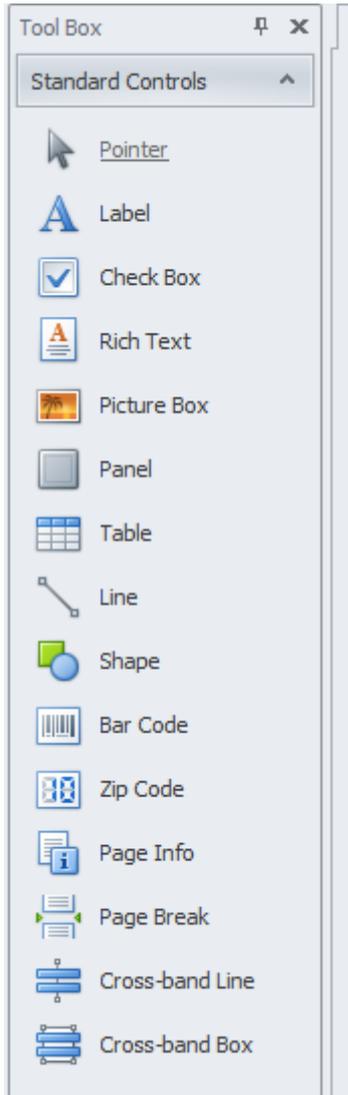


Figure 40 - Standard Controls tool box

To add a line, **<LClick>** on the **Line** object and drag it across to the design window in an approximate location for where it is required.

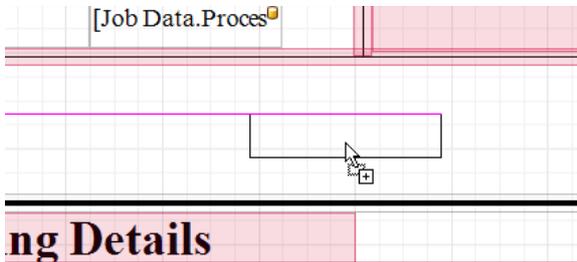


Figure 41 - Adding a Line

Releasing the mouse control places the item.

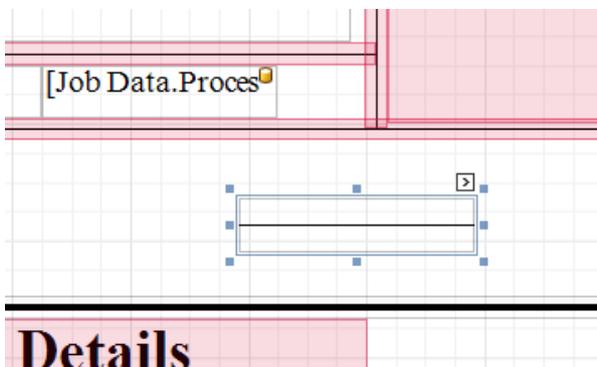


Figure 42 - Positioning the Line in the desired location

The small squares around the object allows for dynamic resizing for width, length etc. you can also reposition the object by **<LClick>** on the object and holding the mouse button down to move about the design area.

With the line command the option will always default to the **Horizontal** settings, but what if you need a **Vertical** or **Angled** line?

Using the Smart Tag on the object allows access to the settings for that object.



Figure 43 - Line Smart Tag

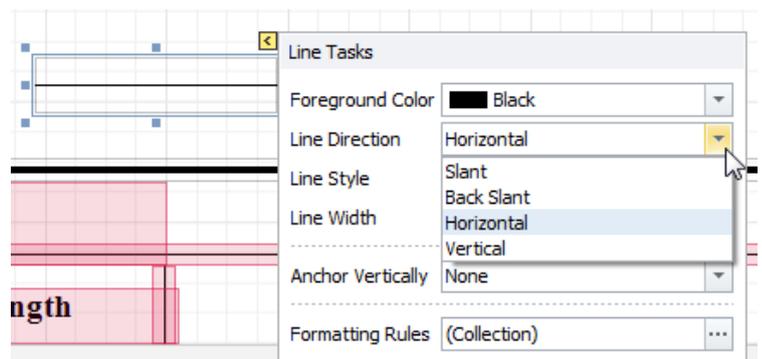


Figure 44 - Line Smart Tag options

Here we see the options for the attitude of the line, also there are settings for colour, style and width to allow many different variations within a report layout.

Experiment with these options to create lines that suit your needs.

Using Labels

Labels are used to identify specific sections of a report by adding text banners.

In the design of the current layout, **Tooling Details** and **Additional Information** are both labels used to identify separate sections.

Labels are also used to identify options in the layout added from the ALPHACAM data sets.

In this design these include any objects that are not listed as **Job Data, Part Data or Operation Data**.

When a label is first dragged to the design area, it is named **"Label##"** where ## is a continuous rising number based on the number of labels added to the design.

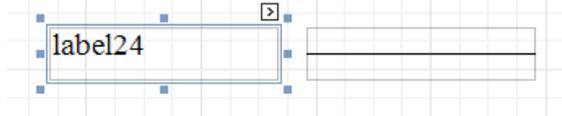


Figure 45 - A Label added in the design area

Here for example, dragging a Label to the side to the recent line addition is listed as **label24** or the 24th label object to be added to the design layout.

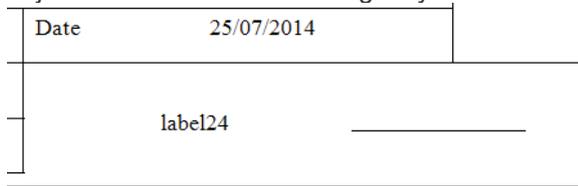
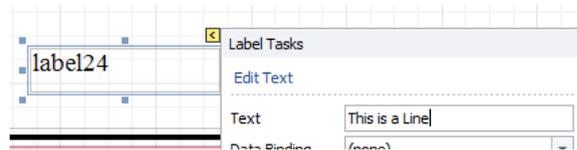


Figure 46 - A label as seen in the Print Preview

To make the label more useful, alter the text so that it represents a more informative item.

You can either double click in the label box to highlight the text and type over it or using the smart tag, change the Text option from the detailed information of the label box.

Design View



Print Preview view

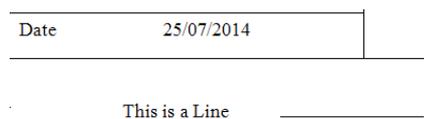


Figure 47 - Example of altering the default text in a label

Labels used in this design layout have been used as identifiers for Customer, Description etc. in the upper section of the report.

Separated by a very thick line object, the Tooling Details and column headers are also labels.

Placing the Tool Number, Description etc. in this section of the report layout means that it will be only created on each page once so that a neat list of tooling is created underneath, rather than having those items repeated for every single tool used on the part.

Adding a part image

In some reports it may prove beneficial to have an image of the part and how it is located with respect to the machine datum. A part image is an ALPHACAM data object.

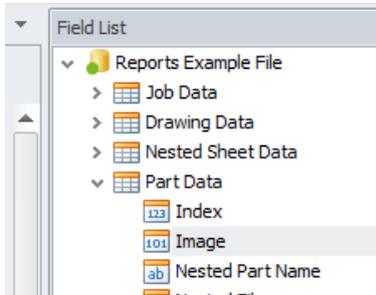


Figure 48 - Part Image option control

Drag and drop this object to the required location in the same manner you have done with Lines and Labels to add an image of the part in the process.

The image that will appear is directly influenced by the Part Image section of the Data options described earlier. For this report, we chose to suppress any toolpaths showing on the image and to set it as an ISO view.

The only other option you need to work on is in the **Smart Tag** section of the image object, the size of the image.

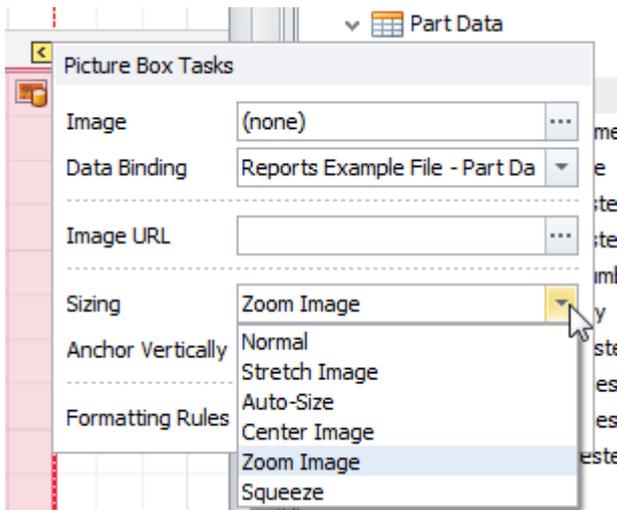


Figure 49 - Altering the default sizing option to the preferred option

If you do not alter the image size options then depending on the settings you have used in the Data options, you may have a very small image, or as is more likely, an image that is too large to fit the actual image picture box.

Using the Sizing drop down allows you to alter the image properties; Zoom Image is the one we use on this object to force the image to fit to the placed object.

Additional Information

With all of the previous described processes you should be able to create new Reports or, using a copy of the original, Edit existing Report files to suit your needs.

Depending on the requirements, additional information can be drawn from the ALPHACAM drawing file to further enhance the report layout.

These can include such detailed information with regards to;

- Parts within nested sheets.
- Detailed tooling information for working flute length.
- Drawing file location.
- NC file location.
- Barcodes.
- Quantity lists.



Version amendments

V	Amendment Description	A	Software Version	Amended Date
8	Minor formatting alterations.	1	2020.1	02/10/2019
8	Template altered to Hexagon branding.	0	2020.0	15/03/2019



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