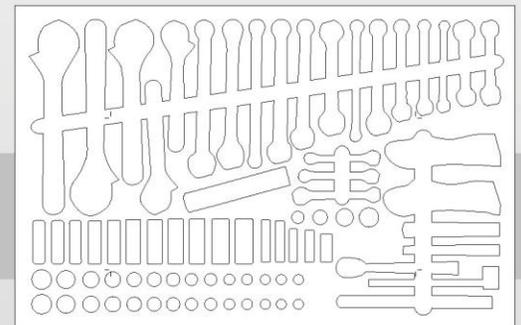


# rousseau

Choose the option  
that best suits you.

- 1/2" & 1" thick foam
- Cutting Service
- Drawing Service

## Technical Guide Customized Foam for Tools



Make sure that you have the latest version before using this document.

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### Overview of services offered and steps to be followed

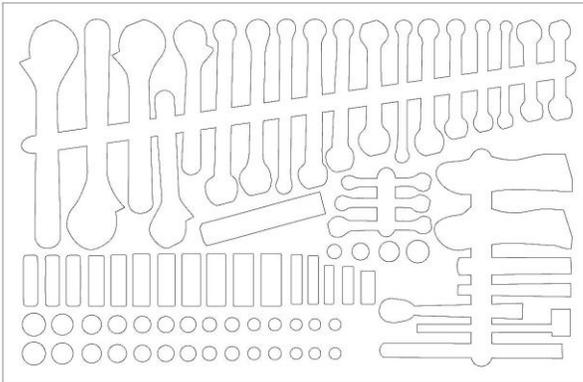
#### 1. Service : Cutting of foam for tools



A drawing respecting the specified criteria as outlined in this technical document must be submitted to Rousseau or have been previously produced by Rousseau, based on whether the client has chosen to have Rousseau produce the drawing or not. Here are the steps to be followed:

- 1.1. If you are providing the drawing.
  - a. Follow the same steps as presented below for the drawing service, but produce the drawing on your own.
  - b. Forward your photo and the drawing to your customer service representative so that it may be validated before cutting the foam.
  - c. Rousseau will cut the foam inserts.
- 1.2. If the drawing is produced by Rousseau (following customer approval as noted in point 2.8 hereafter) :
  - a. Rousseau will cut the foam inserts.

#### 2. Service : Drawings for taking photos



A photo respecting the criteria as specified in this technical document must be submitted to Rousseau. Here are the steps to follow to correctly take your photo :

- 2.1. Identify the nominal dimensions of the drawer.  
Example : RF31-302704 = 30" x 27".
- 2.2. Determine the real dimensions of the foam. According to the dimensions table presented in technical document R58.  
Example : RG\_\_-3027-02 = 25 1/2" x 23 1/2".
- 2.3. Cut the cardboard according to the foam dimensions.
- 2.4. Place the tools on the cardboard. Be sure to respect the minimum spaces required between and around tools (as specified in this technical document).
- 2.5. Take a photo with the tools in place. For tools 1" or more in height, it is preferable to draw the outline of the tool as precisely as possible and to take the photo of the cardboard without the tool in place.
- 2.6. Forward your photo to your customer service representative so that it may be verified before a drawing is produced.
- 2.7. One of our technicians will produce a technical drawing as per the photo submitted.
- 2.8. Approve the drawing. The drawing will be sent to you via email by your customer service representative.

### Foam part numbers and sizes

**1. Foam for tools to be cut for drawer RF31 / RF32 which includes:**

- 1.1. Black ½" thick adhesive foam for cutting
- 1.2. Blue ¼" thick foam NOT cut

Part numbers	For drawer RF31/32	Real dimensions of foam
RG46-2421-01	24" W x 21" D	19 ½" W x 17 ½" D
RG46-2424-01	24" W x 24" D	19 ½" W x 20 ½" D
RG46-2427-01	24" W x 27" D	19 ½" W x 23 ½" D
RG46-3021-01	30" W x 21" D	25 ½" W x 17 ½" D
RG46-3024-01	30" W x 24" D	25 ½" W x 20 ½" D
RG46-3027-01	30" W x 27" D	25 ½" W x 23 ½" D
RG46-3618-01	36" W x 18" D	31 ½" W x 14 ½" D
RG46-3624-01	36" W x 24" D	31 ½" W x 20 ½" D
RG46-3627-01	36" W x 27" D	31 ½" W x 23 ½" D
RG46-4218-01	42" W x 18" D	37 ½" W x 14 ½" D
RG46-4224-01	42" W x 24" D	37 ½" W x 20 ½" D
RG46-4818-01	48" W x 18" D	43 ½" W x 14 ½" D
RG46-4824-01	48" W x 24" D	43 ½" W x 20 ½" D
RG46-4827-01	48" W x 27" D	43 ½" W x 23 ½" D
RG46-6024-01	60" W x 24" D	55 ½" W x 20 ½" D
RG46-6027-01	60" W x 27" D	55 ½" W x 23 ½" D

**2. Foam for collets to be cut for drawer RF31 / RF32 which includes:**

- 2.1. Black 1" thick foam for cutting

Part numbers	For drawer RF31/32	Real dimensions of foam
RG47-3021-01	30"W x 21"D	25 ½"W x 17 ½"D
RG47-3024-01	30"W x 24"D	25 ½"W x 20 ½"D
RG47-3027-01	30"W x 27"D	25 ½"W x 23 ½"D
RG47-3618-01	36"W x 18"D	31 ½"W x 14 ½"D
RG47-3624-01	36"W x 24"D	31 ½"W x 20 ½"D

**3. Foam for tools to be cut for drawer WS40 which includes:**

- 3.1. Black ½" thick adhesive foam for cutting
- 3.2. Blue ¼" thick foam NOT cut

Part numbers	For drawer WS40	Real dimensions of foam
WS4C-1821-01	18"W x 21"D	14 7/8"W x 18 7/8"D

**4. Foam for tools to be cut for drawer RK03 for tech caddy which includes:**

- 4.1. Black ½" thick adhesive foam for cutting
- 4.2. Blue ¼" thick foam NOT cut

Part number	For drawer RK03	Real dimensions of foam
RK51-3018-01	30"W x 18"D	20 11/16"W x 13 3/16"D

**5. Foam for collets to be cut for drawer RK03 for tech caddy which includes:**

- 5.1. Black 1" thick adhesive foam for cutting

Part number	For drawer RK03	Real dimensions of foam
RK52-3018-01	30"W x 18"D	20 11/16"W x 13 3/16"D

**6. Foam for tools to be cut for shelf RK00 for tech caddy which includes:**

- 6.1. Black ½" thick adhesive foam for cutting
- 6.2. Blue ¼" thick foam NOT cut

Part number	For shelf RK00	Real dimensions of foam
RK57-3018-01	30"W x 18"D	22 5/16"W x 15 3/16"D

**7. Foam for collets to be cut for shelf RK00 for tech caddy which includes:**

7.1. Black 1" thick adhesive foam for cutting

Part number	For drawer RK03	Real dimensions of foam
RK58-3018-01	30"W x 18"D	20 11/16"W x 13 3/16"D

**8. Service : Cutting of foam RG56**

8.1. Rate according to number of tools to cut RG56-01

**9. Service : Drawings for foam RG57 & RG58**

9.1. Flat rate (all sizes) RG57-01

9.2. Rate according to number of tools to be drawn RG58-01

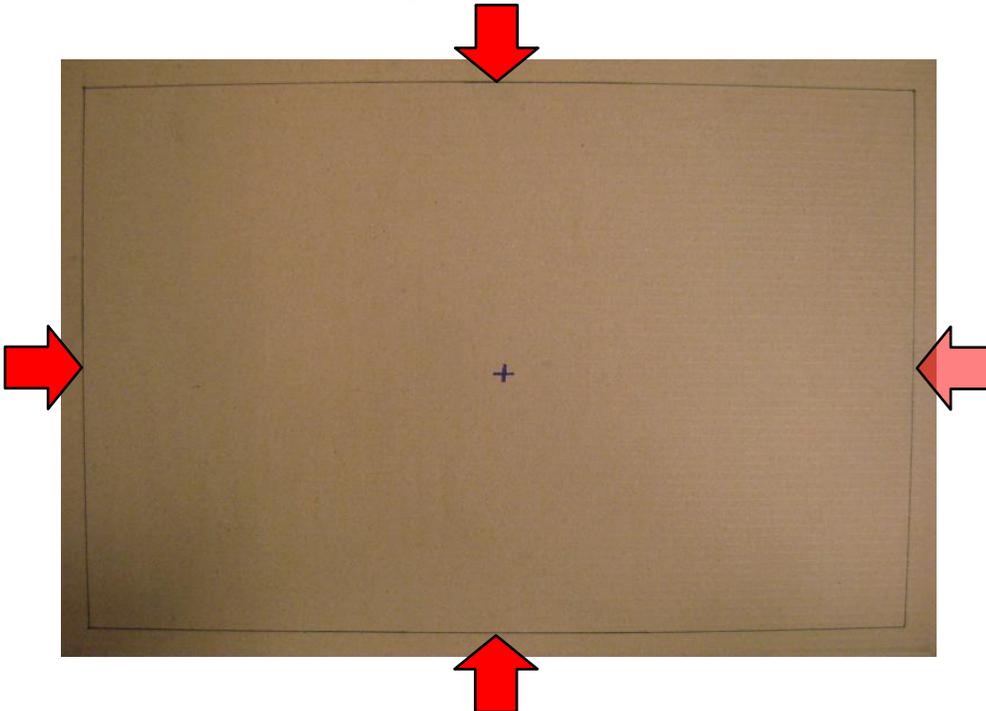
### Procedures and criteria for taking photos



**ATTENTION :** *The quality and the preciseness of the cut on the foam inserts will be the direct reflection of how well the procedures established and outlined here were followed.*

#### 1. Preparing the cardboard

- 1.1. Cut a piece of cardboard to the same dimensions as the foam insert to be cut. Refer to the "Foam part numbers and sizes" section.
- 1.2. Draw a line to serve as a margin on all sides at 1" from the sides of the cardboard.



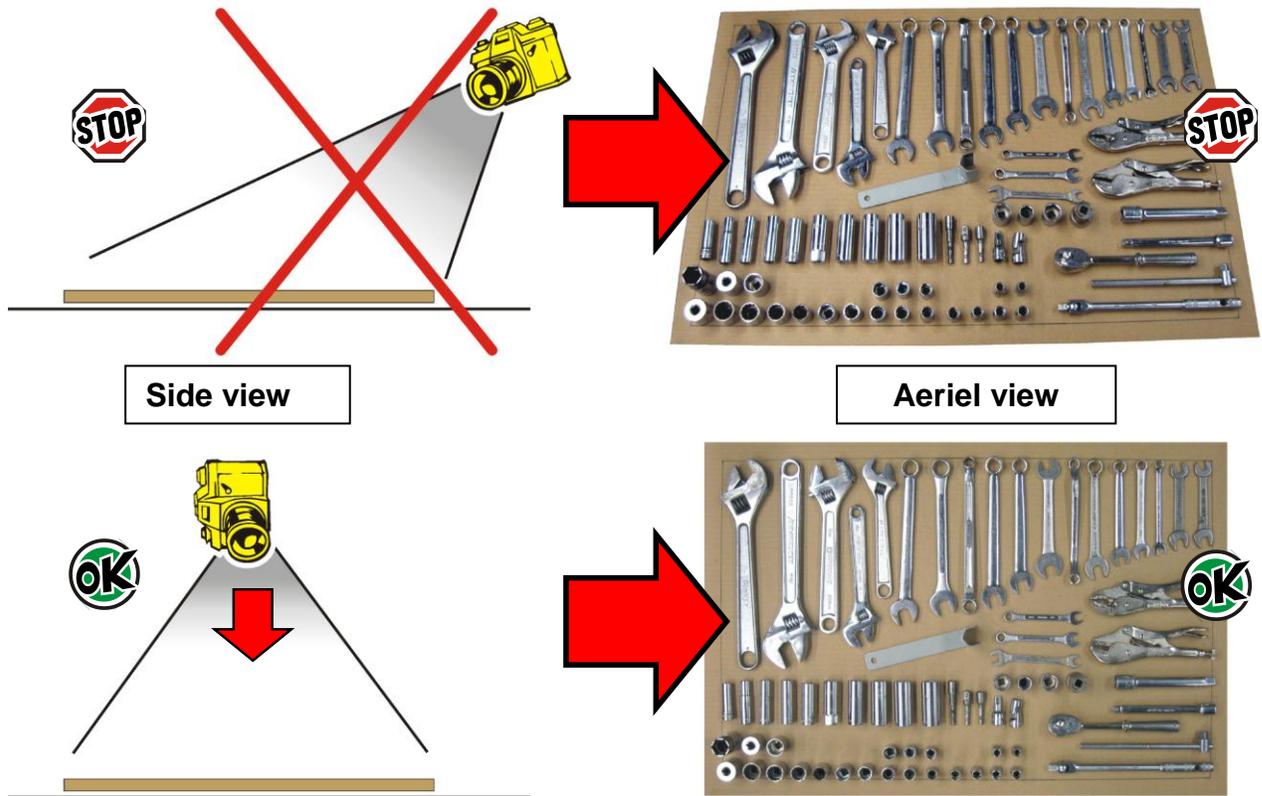
#### 2. Tool layout

- 2.1. Layout the different tools on the cardboard and remember to leave the minimum space required between tools :
  - 2.1.1. 1/2" thick foam = 1/4" to 3/8" spacing
  - 2.1.2. 1" thick foam = 3/8" to 1/2"
  - 2.1.3. Do not place a tool that sits higher than 1" on the cardboard.
- 2.2. For tools that are more than 1" high, trace the contour of the tools directly on the cardboard using a fine tipped permanent marker. This will avoid the problem of perspective with the tools in the photo once taken and in turn make producing the drawing much easier. Be very precise when tracing the tools!
- 2.3. It is also possible to trace the contour of all the tools and take a photo of all the outlines. However, keep in mind that this will take more time.

#### 3. Taking the photo

- 3.1. Adjust the camera in order to have the highest resolution possible.
- 3.2. Position yourself over the cardboard. The camera objective should be positioned directly over the center of the cardboard and in such a way as to tightly frame the entire cardboard surface.

3.3. Troubleshooting : If the cardboard does not seem to be rectangular on the camera screen, this indicates that your objective is not centered over the cardboard. This give the cardboard a slight trapezoid appearance. You must correct the position of your objective in order to produce a photo that can be used. It is not recommended to try and retouch the photo on your computer because this will distort the tools. Simply reposition your objective.



3.4. Before packing away your tools and the cardboard, it is very important to ensure that the photo can be used by importing it into the drawing software.

## Recommendations for the drawing software

### 1. Types of software

- 1.1. It is recommended to use a vector graphics editor such as CorelDraw or Adobe Illustrator in order to correctly draw the outline of the tools.
- 1.2. If you are not familiar with these programs, it is possible to produce a drawing using a similar vector graphics editor such as INKSCAPE. This is an open source program available from the Internet. Inkscape is a program that has similar capacities to those of Illustrator, Freehand, CorelDraw or Xara X. Inkscape is a powerful program that is easy to use, it conforms to all of the standards set for this type of program. It is very easy to learn. Using this technical document, in less than 3 hours, it will be possible for you to master the basic functions of the program and to produce your first tool drawing in order for the foam to be cut.



INKSCAPE

### Procedure for a drawing not produced with INKSCAPE

#### 1. Opening and creating a file

- 1.1. Open the program and it will automatically create a new document.
- 1.2. Save the document in the program's standard format on your hard drive.
- 1.3. Import and insert your tool photo (JPG) that will be used to cut the foam inserts.
- 1.4. Adjust the format of the page in order to ensure that the page is large enough for the foam. Adjust the dimensions to allow for approx. 2" extra in width and height according to the foam dimensions. The format size is not the foam. The page format is only used as the work space for the drawing of the tools. Therefore, you must ensure to place the elements on the formatted page.

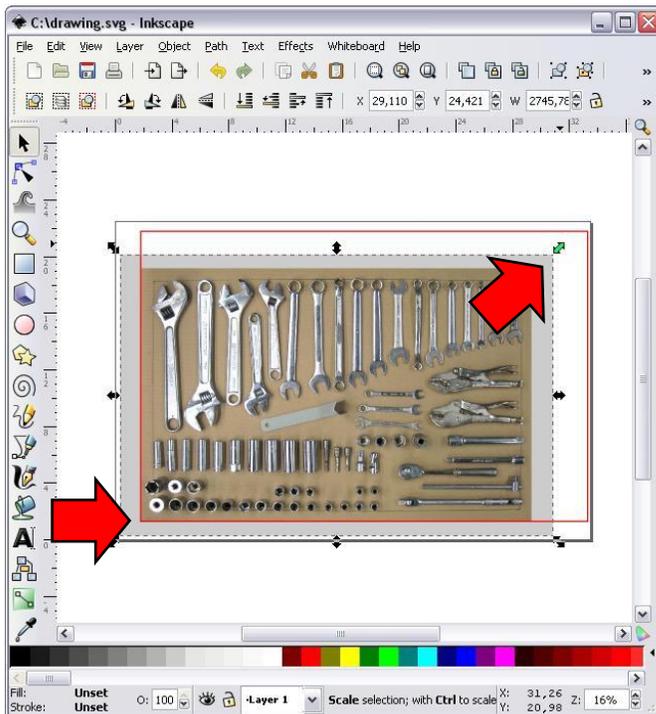
#### 2. Creating a photo to scale

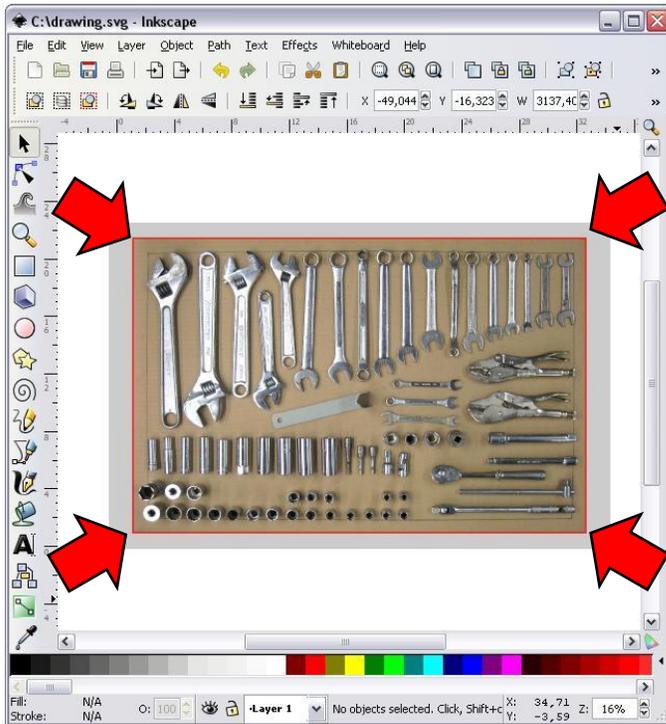
*Note : Before beginning to draw the tools, you must adjust the proportions of the photo in function with the real dimensions of the tools. To do this, follow the steps as outlined below.*

- 2.1. Draw a rectangle  of any size. The rectangle should not be filled-in but should have a line around the contour.
- 2.2. Adjust the dimensions of the rectangle. The rectangle dimensions should be equal to those of the foam inserts to be cut (see pages 4 & 5).
- 2.3. Please ensure that all measurements are expressed in inches.
- 2.4. Place the rectangle on the page because when you export the image at the end of the process, the program will not recognize anything that is not on the page. The page corresponds with the work space and not with the foam. The previously drawn rectangle represents the foam.
- 2.5. Place the photo in the background and the rectangle in the foreground.
- 2.6. Select the photo and move it in order to place the lower left corner directly on the lower left corner of the rectangle.
- 2.7. Ensure that the photo is still selected and adjust the dimensions using the points that appear in each corner. You will most likely have to reposition the lower left corner on the rectangle. Move the photo (position and dimensions) until the cardboard in the photo is equal to the dimensions of the rectangle.

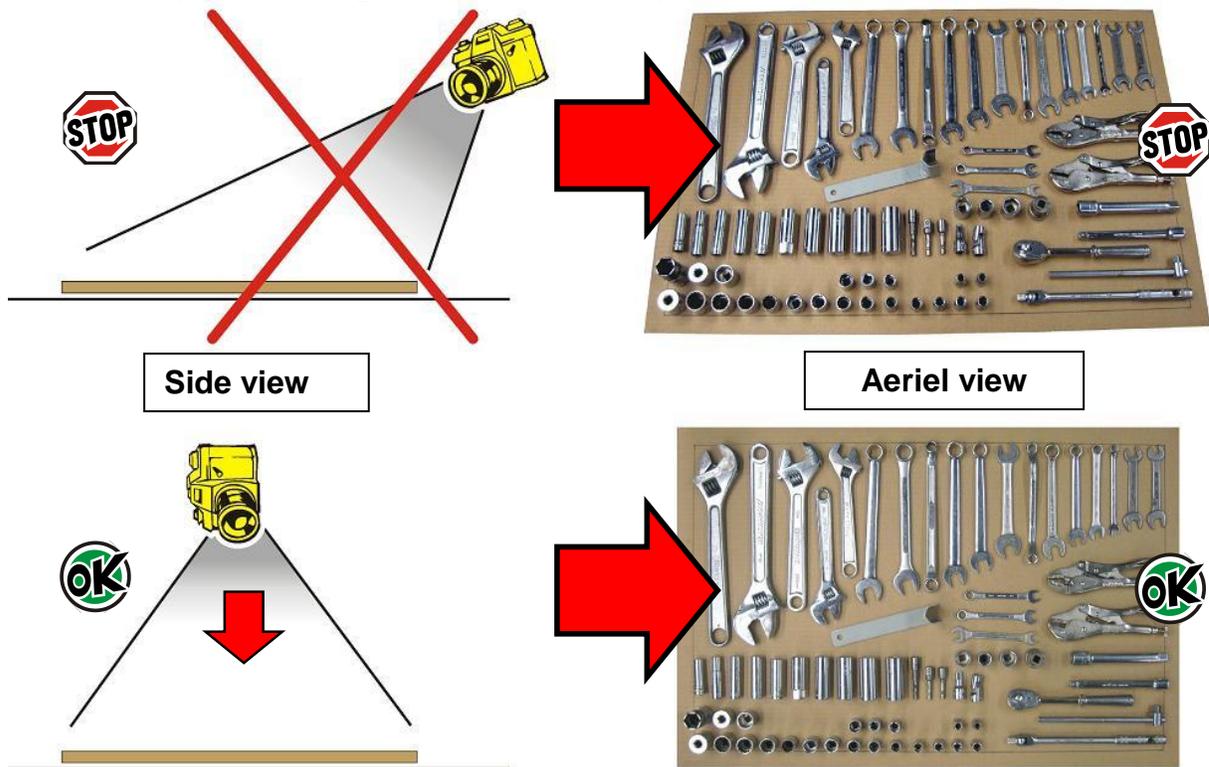
#### **Tip : Positioning**

*It is possible to place an object in the foreground by simply using the "CUT & PASTE" function. Use the CTRL+X (CUT) and CTRL+V (PASTE) keys.*





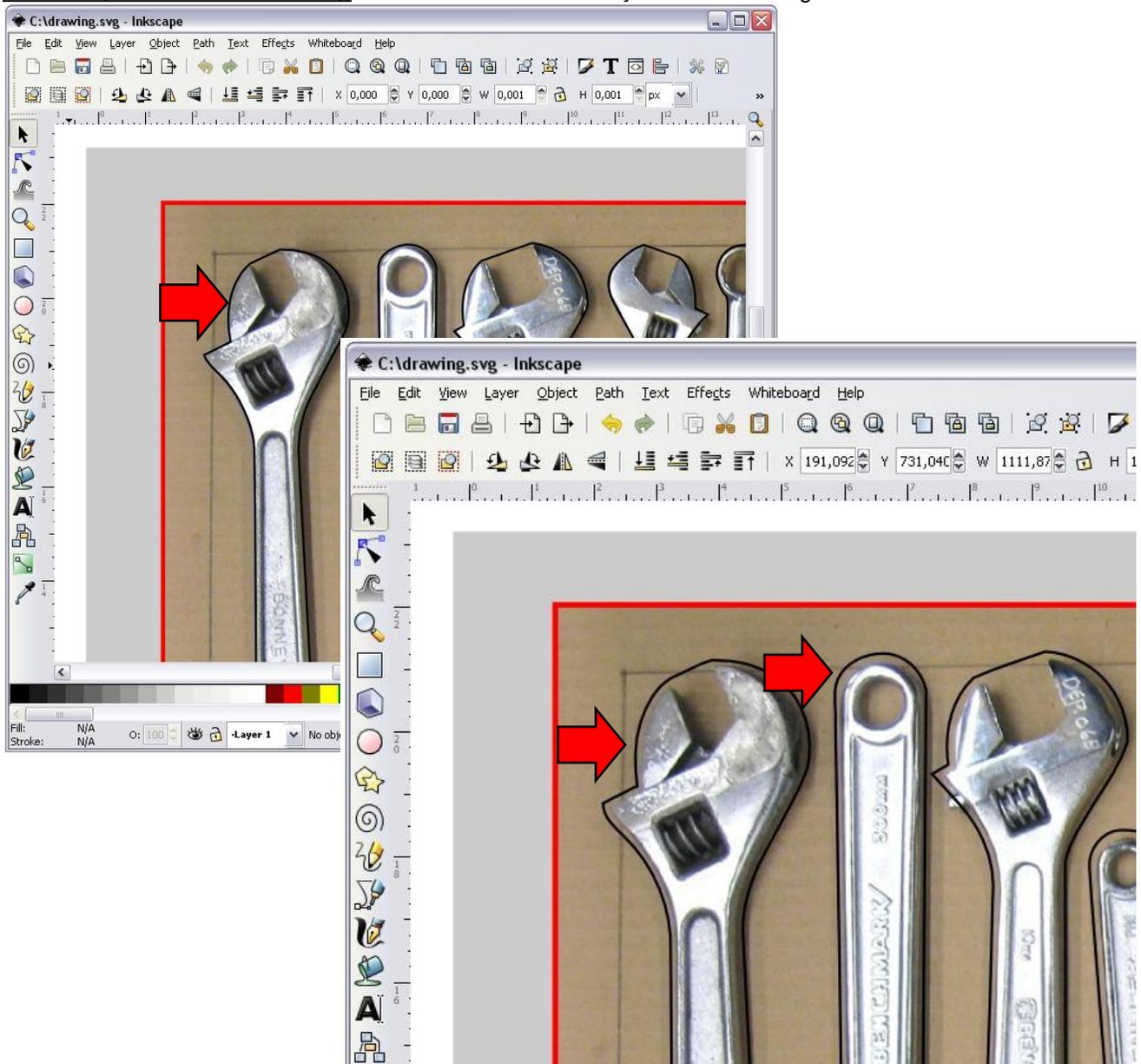
2.8. If the cardboard does not appear to have the same shape as the rectangle and looks more like a trapezoid, it is preferable to take another photo. Be sure, when taking the new photo, that your camera objective is placed directly over the center of the cardboard, this will help avoid the trapezoid shape. It is not recommended to attempt to retouch the photo on the computer because it will warp the image of the tools. You must reposition the camera objective, ensuring that it is centered directly over the cardboard.



2.9. Save the document.

### 3. Tool drawings

- 3.1. It is recommended to trace the outline of the tool in a general way. It is not always useful to recreate all of the details of a given tool.
- 3.2. It is recommended to activate the "GRID" function from the "VIEW" menu. This will provide you with a vertical and horizontal reference for the tools.
- 3.3. It is important to draw the tools with a black outline and with a 1 or 2 pixel thickness.
- 3.4. The exactness of your drawing will be reproduced by the machine that cuts the foam. For example: a curved line comprised of a series of straight lines will be cut as a series of straight lines. Therefore, it would be better to trace a curved line. Second example: an unfinished line will be cut as an unfinished line on the foam.
- 3.5. When you have finished drawing the tools, it may be appropriate to slightly enlarge each tool contour. This will allow for a bit of extra room around each tool. This may also help to compensate for any small errors or imprecisions on the drawing. It is not obligatory to use this function because in some cases, it might be preferable to have a tighter fit around some tools. There is a function on most of these types of software programs that will allow you to enlarge a shape by pushing the contour out (OUTSET). It is recommended to leave the photo under the drawing in order to see how much you have to enlarge the tool contour.



- 3.6. Save the document.

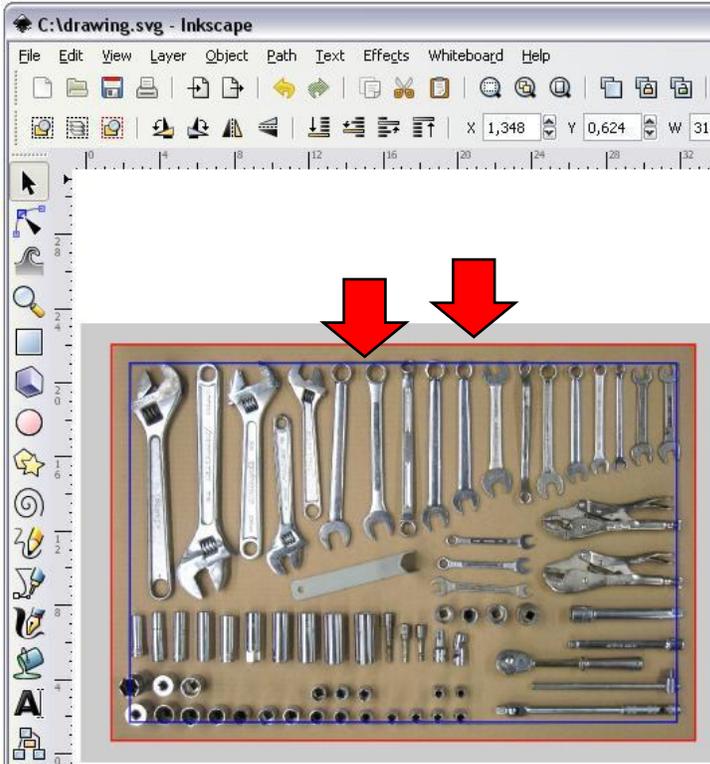


**ATTENTION** : It is important to respect the minimum requirements for spacing around tools:

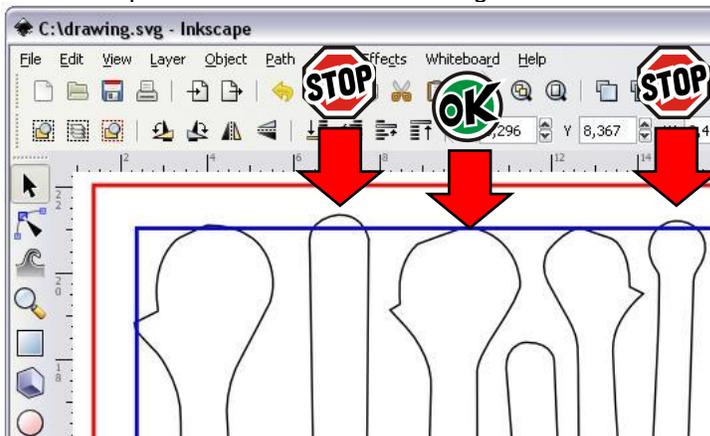
- Keep a 1" border around the entire rectangle that has the same dimensions as the foam.

#### 4. Verifying the space around the tools

- 4.1. Select the first rectangle you created which surrounds the entire tool layout.
- 4.2. Copy the rectangle and use CTRL+C (COPY) followed by CTRL+V (PASTE).
- 4.3. It is recommended to change the colour of the outline on the rectangle.
- 4.4. Select the new rectangle and adjust the dimensions. The new rectangle should be 2" less wide and 2" less high than the original in order to create a 1" margin around the entire tool layout.
- 4.5. You must be sure that the units of measurement are in inches.
- 4.6. Center the new rectangle (the smaller one) on top of the first rectangle (the larger one).



- 4.7. Now, simply ensure that there are no tools sitting outside the smaller rectangle. If there are, reposition them. Delete the photo of the tools before doing this.



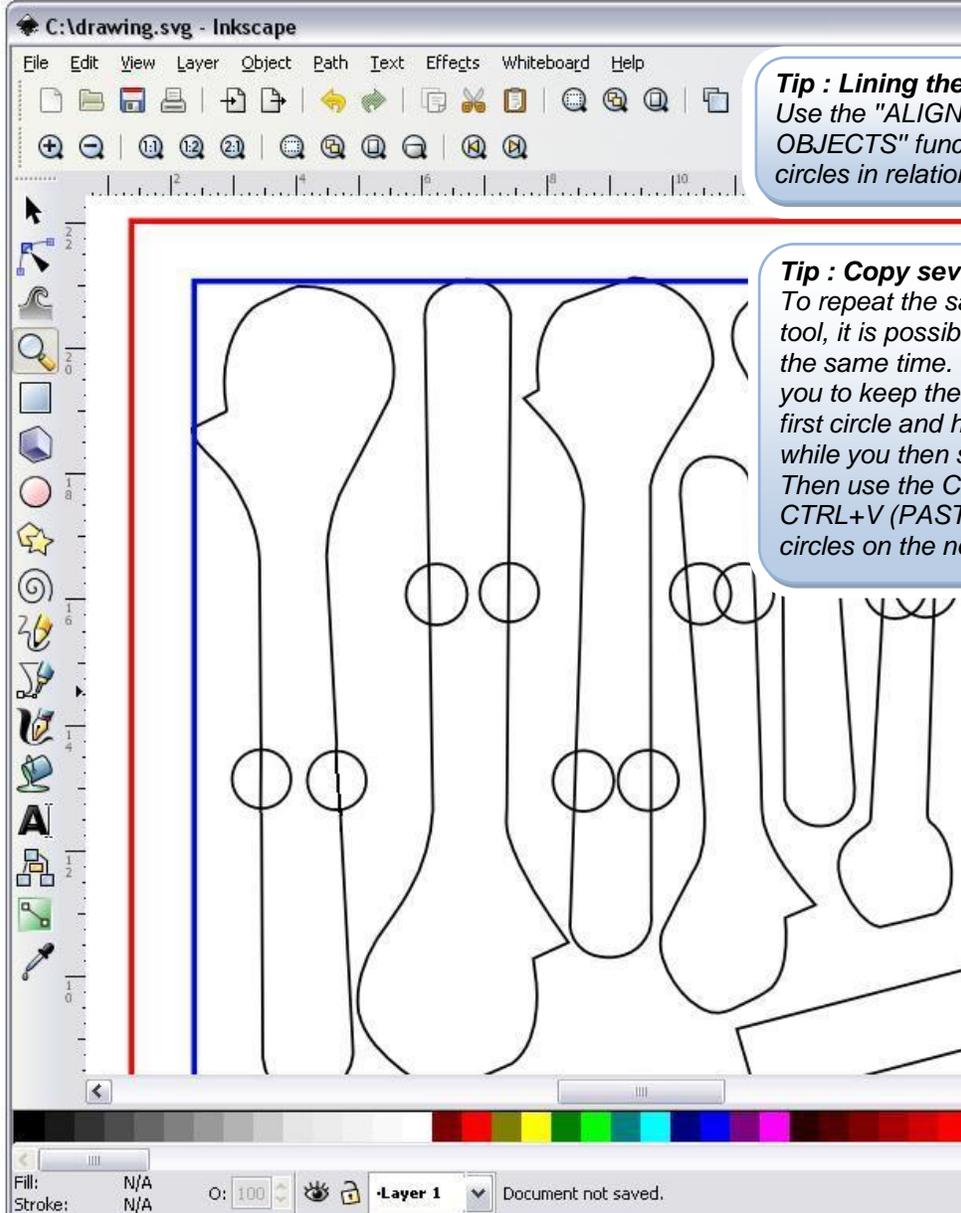
- 4.8. Save your document.

### 5. Adding elements for an ergonomic grip on tools

- 5.1. Target the tools on which you want to add ergonomic grips.
- 5.2. Draw a circle ○. Adjust the dimensions of the circle. For example, a circle with a 1" diameter.
- 5.3. You must be sure that the units of measurement are in inches.
- 5.4. Place the circle on the correct tool on the drawing.
- 5.5. You can add as many circles as you wish by selecting the first circle and using command CTRL+C (COPY) followed by CTRL+V (PASTE).

#### Tip : Ergonomics

*It is recommended to consider adding ergonomic grips around the tools in order to facilitate handling. You can simply add 1" semi-circles on each side of the tool.*



#### Tip : Lining the circles up

*Use the "ALIGN AND DISTRIBUTE OBJECTS" function to correctly position the circles in relation to each other.*



#### Tip : Copy several circles

*To repeat the same circle layout on a new tool, it is possible to copy both circles at the same time. Copying both circles allows you to keep the same spacing. Select the first circle and hold the "SHIFT"  key while you then select the second circle. Then use the CTRL+C (COPY) and CTRL+V (PASTE) functions to place the circles on the next tool.*





**ATTENTION : Ergonomic grips not always required**

Adding ergonomic grips around tools can be very useful in certain cases however, one must be careful because they may not be useful in every case. In fact, they may even get in the way in some cases.

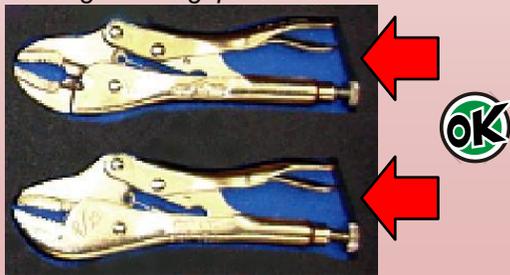
**Example no.1 : A tool that is more than 1" high placed on a cut foam insert ½" high.**

In this case, seeing as the tool is higher than the foam insert, it is easy to grip without the help of an ergonomic grip.



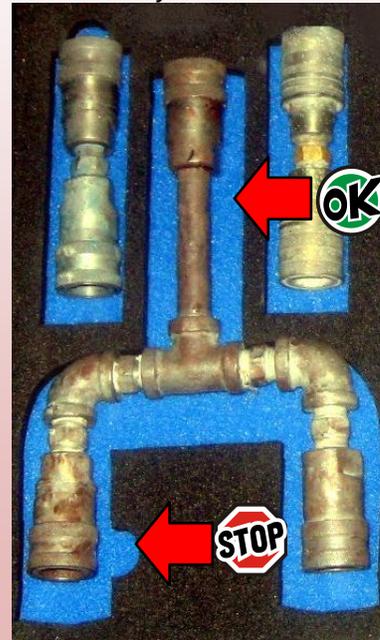
**Example no.2 : A tool like a pair of pliers**

A shape with an empty section due to the shape of the tool allows for easy handling without having to add ergonomic grips.



**Example no.3 : A tool with a lot of space around it.**

In certain cases, using foam inserts is to visually facilitate locating tools (5S application). In these situations, some people will prefer to leave extra space around the tools. In these cases, it may not be necessary or useful to add ergonomic grips.



**Tip : Alternative ergonomic grip**

Another method for adding an ergonomic grip is to draw a rectangular shape with rounded ends which passes through the entire series of tools. To do this, draw a rectangle and adjust the dimensions to those required. It is possible to round the ends of the rectangle. You may want to pivot the rectangle in order to place it correctly through your series of tools.





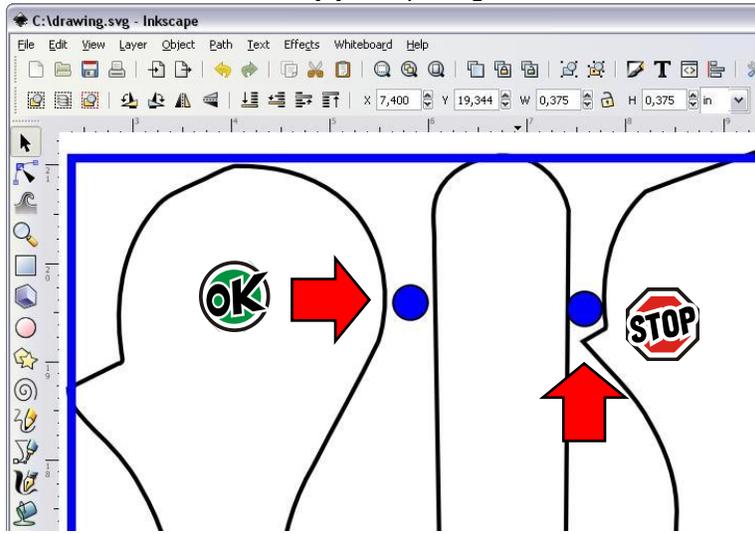
### 6. Verifying the space between the tools

- 6.1. Draw a circle . Adjust the dimensions of the circle. A circle with a 0.375" diameter for example.
- 6.2. Please ensure that the units of measurement are in inches.
- 6.3. Once the circle has been drawn, ensure that it is in the foreground.
- 6.4. It is recommended to fill the circle in with a colour.
- 6.5. Select the circle and place it over the drawings of your tools.  
The circle corresponds to the minimum spacing required between tools, use it to verify your spacing.

### ATTENTION :

It is important to respect the minimum spacing requirements around the tools :

- 1/2" thick foam : 1/4" to 3/8"
- 1" thick foam : 3/8" to 1/2"



### 7. Exporting and verifying the drawings

- 7.1. Save this document in the program's standard format on your hard drive if not already done.
- 7.2. Save the drawing in a "PDF" file.
- 7.3. Open the "PDF" file with a program that allows you to view this type of file (ex : Acrobat Reader) and ensure that the file is the same as your original drawing and is not missing any lines or tools.
- 7.4. Print the drawing from your drawing program or from Acrobat Reader. The goal of doing this is to simply verify the dimensions of a couple of the tools on the drawing.
- 7.5. If you do not have access to a large scale printer, it is often possible to print a section of the drawing on a standard size piece of paper.
- 7.6. It is recommended to print and verify several different types of tools. Please note that the scale should be 1:1.
- 7.7. If printing from Acrobat Reader :
  - 7.7.1. Open the file
  - 7.7.2. Select a drawing zone (draw a selection rectangle).
  - 7.7.3. Print the selected drawing zone. Check the appropriate option in the print menu.
- 7.8. Send your drawing in a "PDF" file as well as the original "JPG" photo to your Rousseau customer service representative.

### ATTENTION : Your file must be named according to the following models

Project name or number – drawer dimensions(WWDDHH) – sequential numbers (01-02-03, etc.)

**Example no1 :** MLBodyShop-302703-01  
MLBodyShop-302703-02  
MLBodyShop-302704-03

**Example no2 :** DSHIndustries-362403-01  
DSHIndustries-362404-02  
DSHIndustries-362404-03  
DSHIndustries-362405-04

**Example no3 :** Project18A67-302703-01  
Project18A67-302703-02



## INTERNET links - INKSCAPE vector imaging software

### 1. Primary Internet links :

#### 1.1. Home page for INKSCAPE

- 1.1.1. <http://www.inkscape.org/?lang=en&css=css/base.css> (English version)
- 1.1.2. [www.inkscape.org](http://www.inkscape.org) (French version)

#### 1.2. Software download page

- 1.2.1. <http://www.inkscape.org/download/?lang=en> (English version)
- 1.2.2. <http://www.inkscape.org/download/?lang=frr> (French version)

### 2. Secondary Internet links :

#### 2.1. Complete software tutorial

- 2.1.1. <http://www.inkscape.org/doc/index.php?lang=en> (English version)
- 2.1.2. <http://www.inkscape.org/doc/index.php?lang=fr> (French version)

#### 2.2. Other software tutorials\*

- 2.2.1. <http://inkscapetutorials.wordpress.com/> (tutorial dedicated to specific program functions)

*Note : The tutorial presented in this technical document is sufficient for learning how to draw tools in INKSCAPE.*

*The links published here for other tutorials will assist you in perfecting your skills with the program for drawings other than for tools.*



INKSCAPE

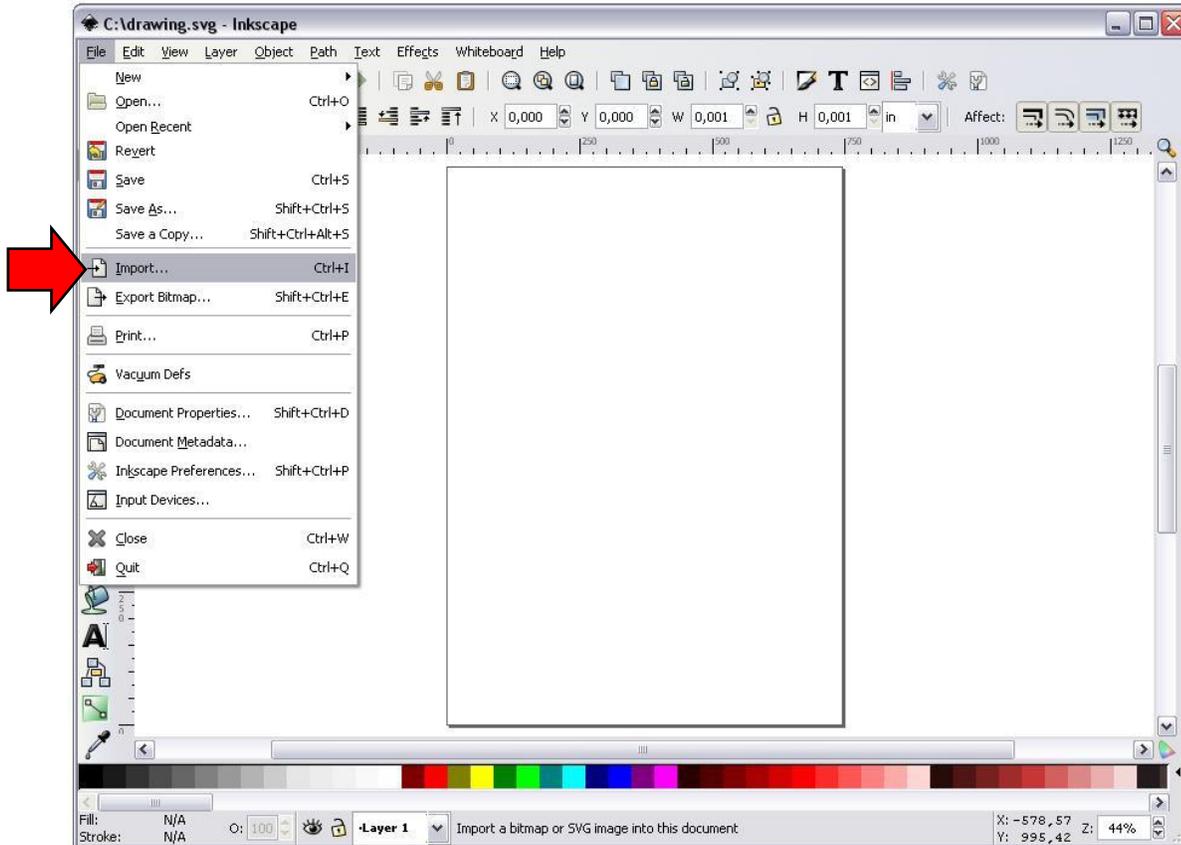
## Tutorial - INKSCAPE vector imaging software



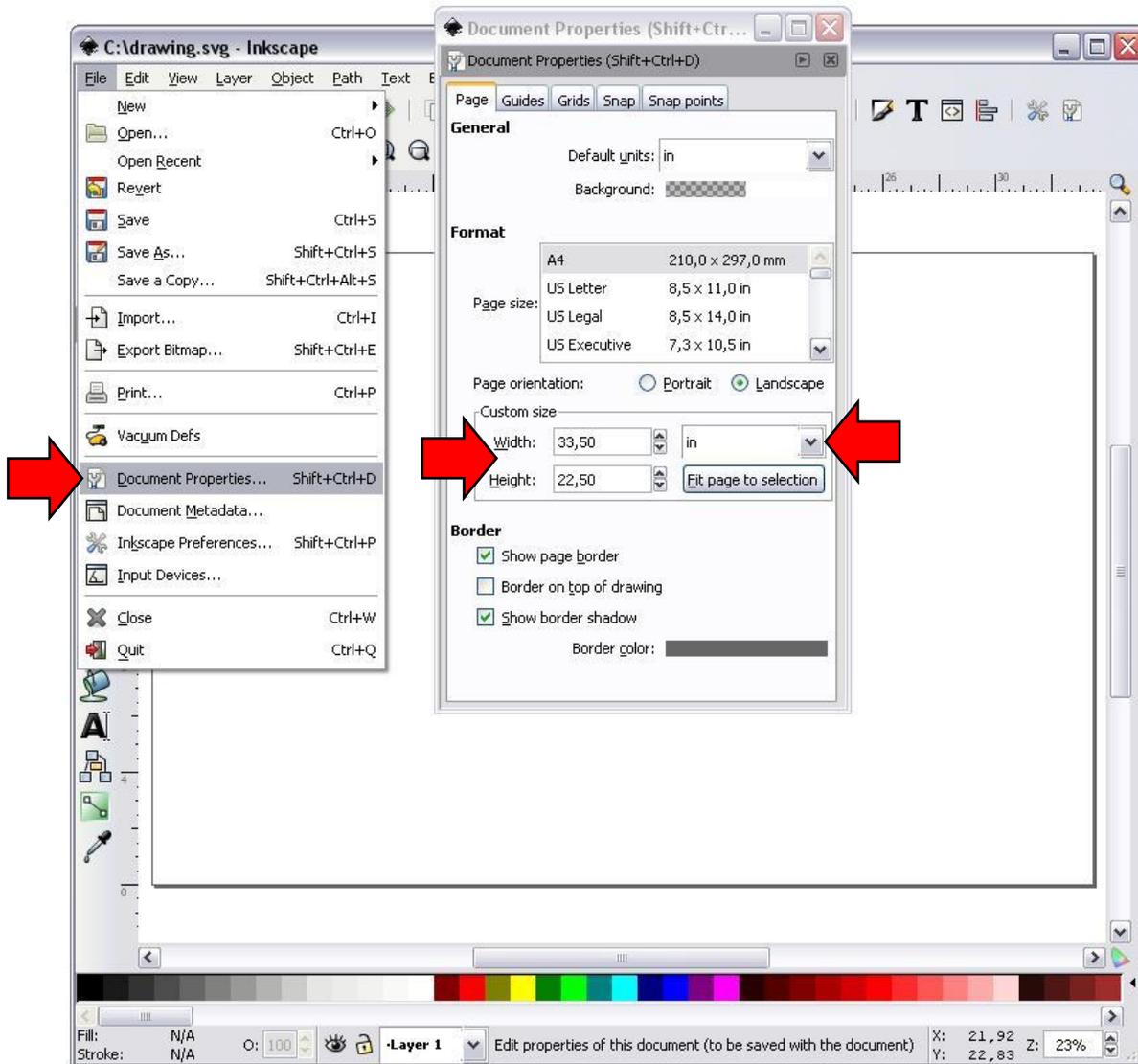
INKSCAPE

### 1. Opening and creating a file

- 1.1. Open the program and it will automatically create a new document.
- 1.2. Save the document in the program's standard format (.svg) on your hard drive.
- 1.3. From the "FILE" menu, select the option to "IMPORT" and insert the photo (JPG) of your tools to be cut out on your foam inserts.



- From the "FILE" drop-down menu, select "DOCUMENT PROPERTIES" to adjust the page format in order to ensure that it is big enough to accommodate the foam. Adjust the dimensions by allowing approx. 2" more in width and height than the dimensions of the foam. The page format is not the foam. It is simply the work space for the tool layout. Therefore, you must place your items on the page format.

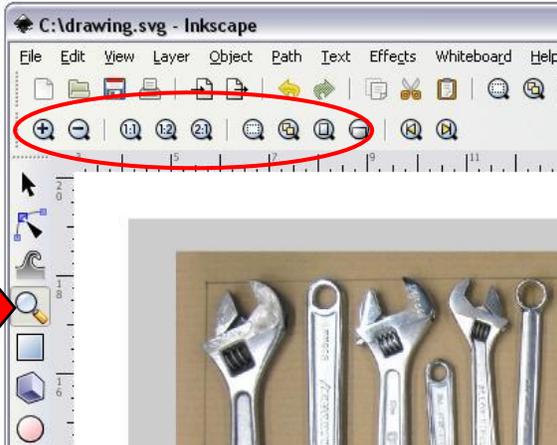


### 2. Viewing function

- 2.1. The "ZOOM"  function is located on the left side of the screen in the tools bar.
- 2.2. Once the "ZOOM"  button has been clicked, another tool bar will appear on the upper portion of the screen with other functions such as "ZOOM-", "ZOOM+" and "ZOOM TO FIT SELECTION IN WINDOW". It is recommended to be as familiar with these functions as possible, while drawing the tools it helps to be zoomed in to achieve more precision in your drawing.
- 2.3. Using the "ZOOM" function , adjust the zoom to be the same size as the photo.

#### Tip : Keyboard short-cuts

- a. F3 = "ZOOM" function
- b. "-" = zoom out
- c. "+" = zoom in
- d. "4" = zoom selection in window
- e. "5" = zoom page



#### Tip: Short-cuts with the mouse

- a. Right click to zoom out
- b. Left click to zoom in
- c. Left click and hold the button down. Choose a section and let go. This allows you to zoom inside the selected window.
- d. Roller ball on the mouse allows you to move vertically.
- e. Side button (on left) on an ergonomic mouse allows for both vertical and horizontal movements.

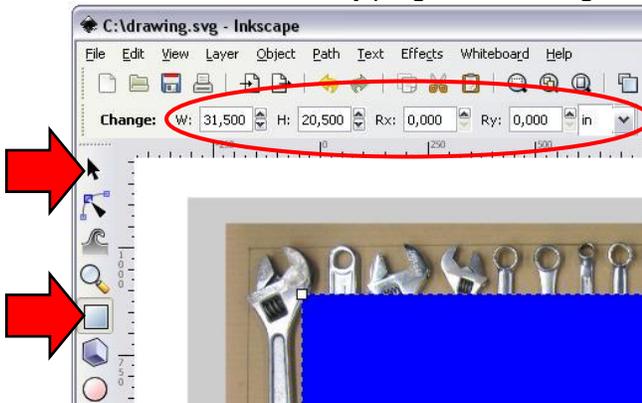


### 3. Creating a photo to scale

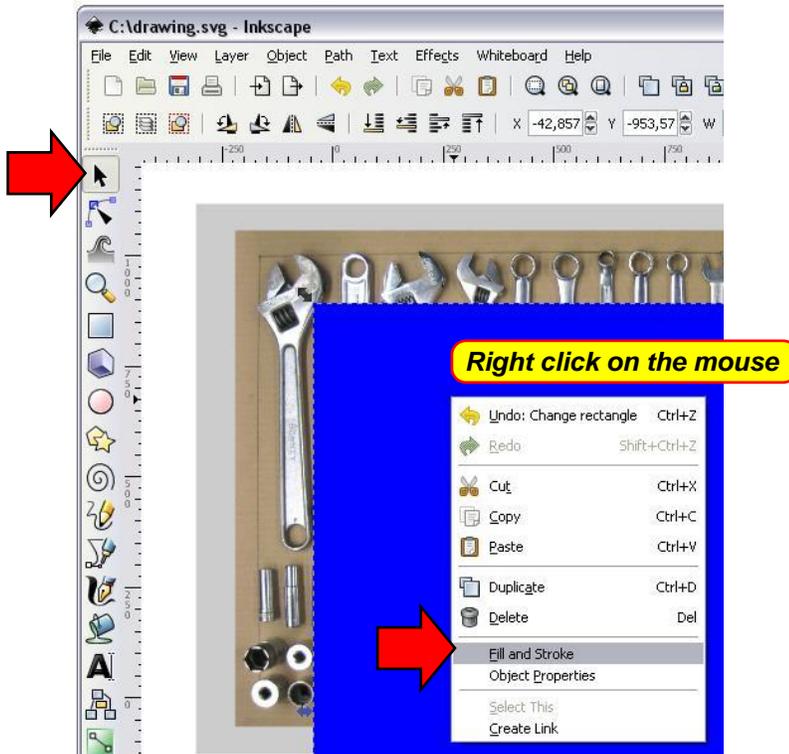
*Note : Before beginning to draw the tools, you must adjust the proportions of the photo in function with the real dimensions of the tools. To do this, follow the steps as outlined below.*

- 3.1. Draw a rectangle of any size on the page. The "RECTANGLE"  function is located on the left side of the screen on the tool bar under the "ZOOM"  option. Click on the drawing zone, hold the left button on the mouse and drag the mouse to create a rectangle. Once finished, release the mouse button.
- 3.2. Your rectangle may have rounded corners. Activate the "RECTANGLE" function. Adjust the following parameters on the upper tool bar. Change all of the values to be equal to "0".  
Rx: 0,000 Ry: 0,000
- 3.3. Select the rectangle with the "SELECT AND TRANSFORM" arrow . On the upper tool bar, adjust the dimensions of the rectangle by changing the values in the fields that have appeared on the top of the screen. The rectangle dimensions must be equal to those of the foam to be cut. (W=width and H = height). See information on pages 4 & 5.  
Ex: W: 31,500 H: 20,500

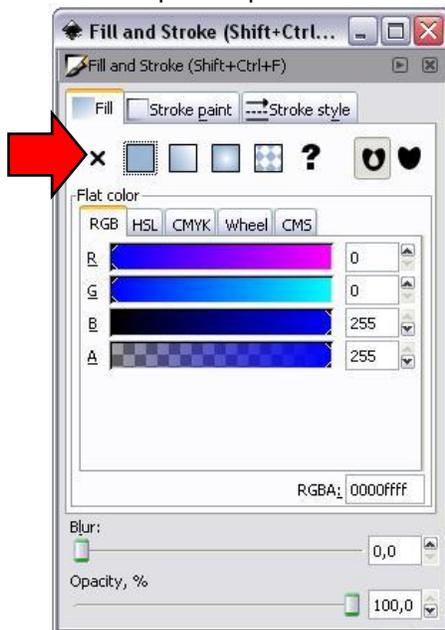
- 3.4. Please ensure that they program is running in inches. It is normally in pixels (px) by default .



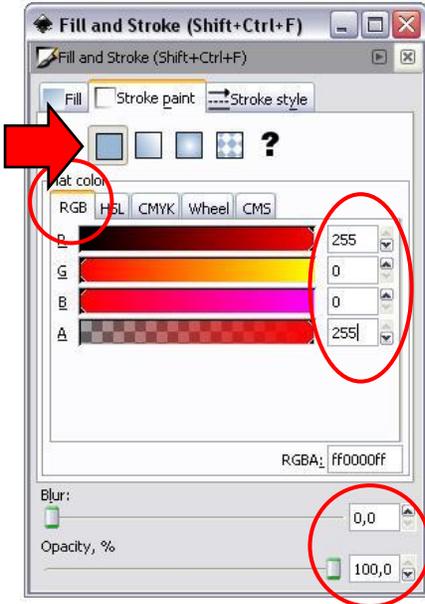
- 3.5. By default, your rectangle may have be a colour that has no contour. If this is the case, click on the rectangle with the "SELECT AND TRANSFORM" arrow  at the top of the left hand side tool bar. Once the rectangle has been selected, right click by placing the mouse above the contour of the rectangle in order to make the scroll down menu appear. Select the "FILL AND STROKE" option.



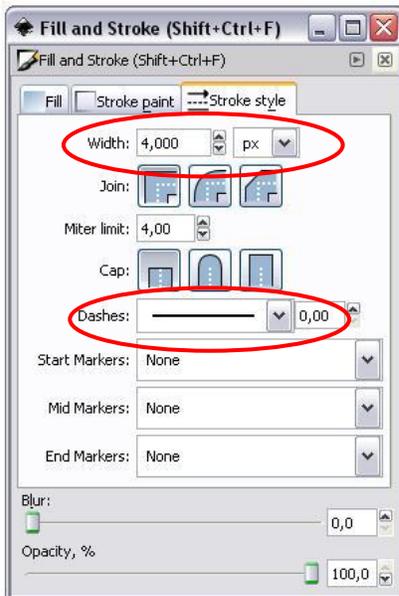
- 3.6. In the "FILL AND STROKE" menu, there are three tabs. Click the "FILL" tab. Click on the "X" in order to select the "no paint" option.



- 3.7. In the "FILL AND STROKE" menu, click on the "STROKE PAINT" tab, click the  to assign a contour colour to the rectangle. From the "RGB" tab and in the circled fields, type the same values as shown on the image below which will give you the colour red. You must also ensure that the "BLUR" and "OPACITY" values are respectively set at 0 and 100 as shown in the image below.



- 3.8. In the "FILL AND STROKE" menu, click on the "STROKE STYLE" tab. Assign a "4,000 px" value for the contour width and select the "MITRE JOIN" pointed contour.



- 3.9. Place the rectangle on the page because when you export the file at the end of the process, the program will not recognize anything outside the page. Use the "SELECT AND TRANSFORM" arrow  to click the object to be moved and hold the left button on the mouse to move the object.

3.10. Place the photo in the background and the rectangle in the foreground by using the option with allows you to adjust the position of the item selected. This option is located in the upper tool bar.

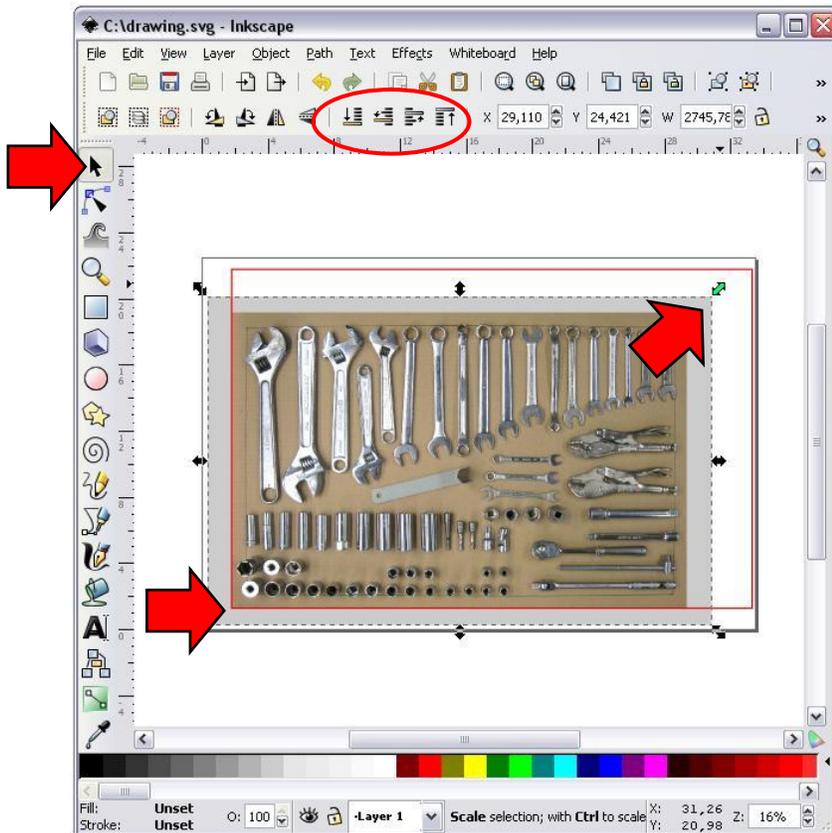


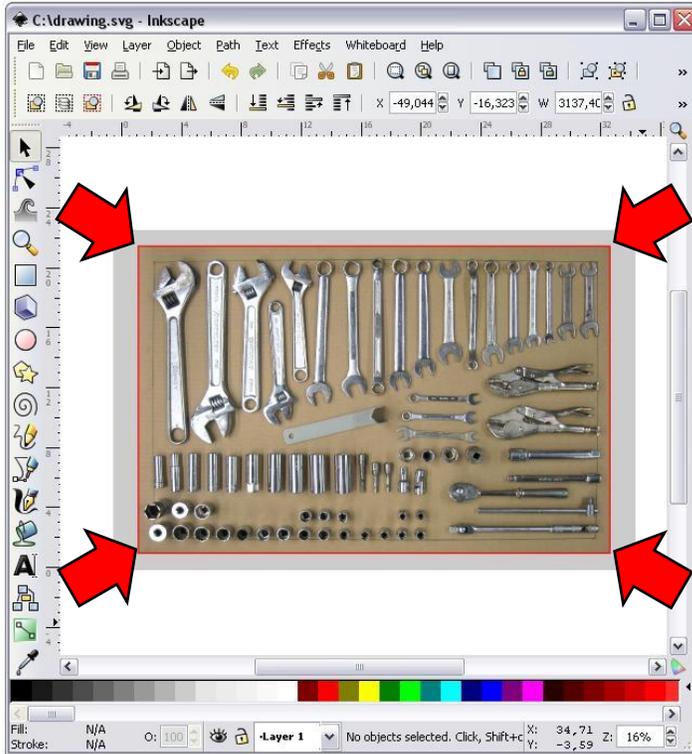
3.11. Select the photo with the "SELECT AND TRANSFORM" arrow . Move the photo and align the bottom left corner of the the cardboard in the photo with the corresponding corner of the rectangle.

3.12. Ensure that the photo is still selected and adjust the dimensions using the points that appear on the four corners of the photo. You will most likely have to reposition the lower left corner of the photo on the rectangle. Manipulate the photo (position and dimensions) until the cardboard in the photo has dimensions equal to those of the rectangle. See the final result on the following page.

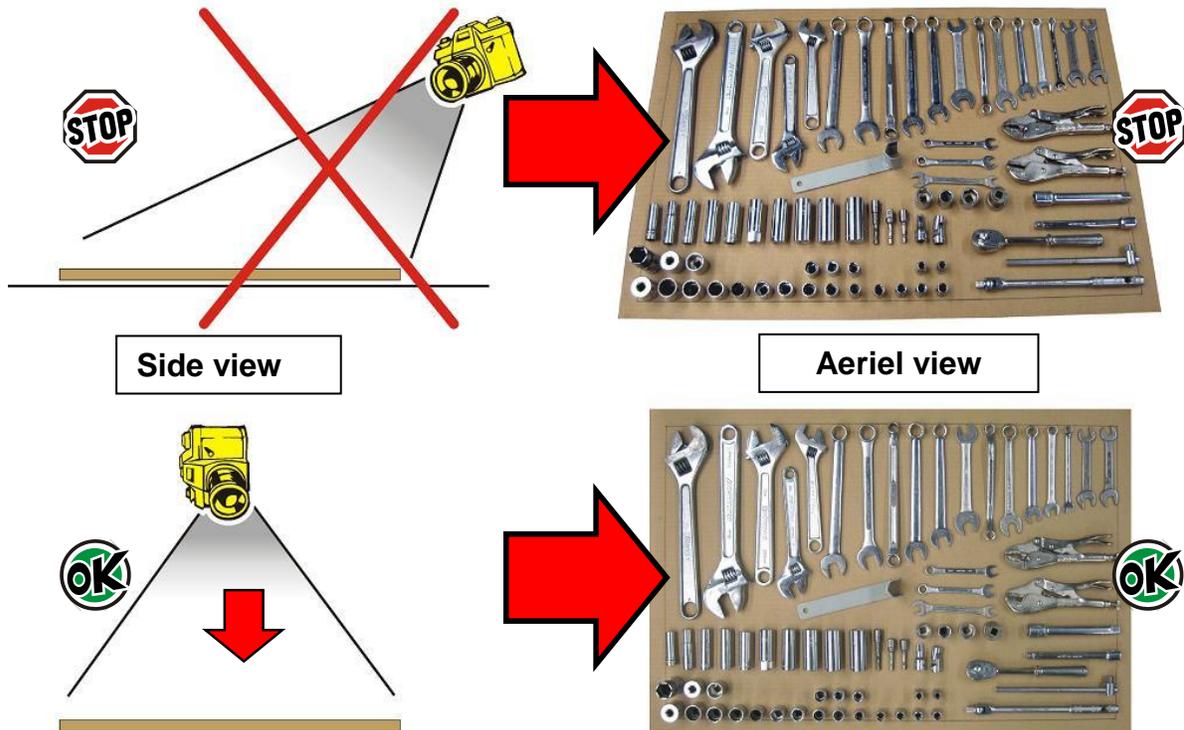
### Tip : Positioning

- It is possible to place an object in the foreground by simply using the CTRL+X (CUT) and CTRL+V (PASTE) functions.
- The "Pos 1" or "HOME" keys allow you to place an object in the foreground.





3.13. If the cardboard does not appear to have the same shape as the rectangle and looks more like a trapezoid, it is preferable to take another photo. Be sure, when taking the new photo, that your camera objective is placed directly over the center of the cardboard, this will help avoid the trapezoid shape. It is not recommended to try and retouch the photo on your computer because this will distort the tools.



3.14. Save the document.

### 4. Drawing tools

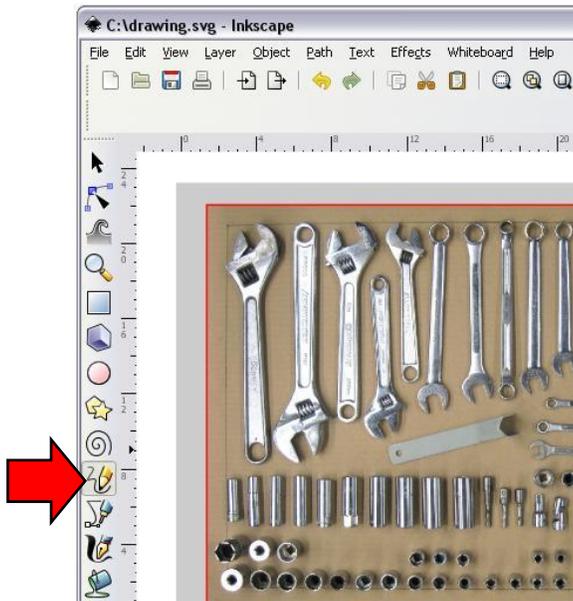
4.1. Two different tools can be used for drawing the contour of your tools.

4.1.1. The "LINES"  function located on the tool bar on the left side of the screen.

4.1.1.1. This function allows you to draw straight lines by click two points on the photo.

4.1.1.2. By holding the mouse button, you can draw curves that are more or less precise. This option is not the most recommended.

4.1.1.3. To continue an existing line from the end of another, ensure that you have selected the existing line with the "SELECT AND TRANSFORM" arrow . Then, as when starting a new line, you must relick the end of the other line. Now you simply determine where the end of the new line will be.



#### **Tip : Trace and outline (global)**

*It is recommended to trace the contour of a tool in a very general way. It is not always useful to recreate each and every detail on the tool.*



#### **Tip : Aligning the shapes**

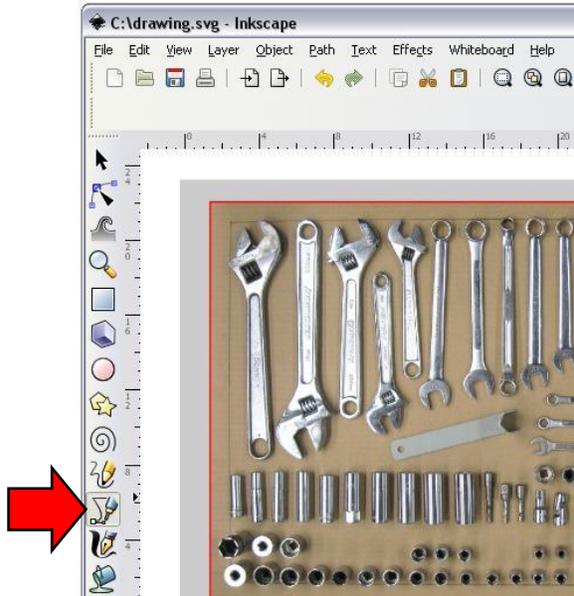
*It is recommended to activate the "GRID" function from the "VIEW" menu. This gives you reference points for vertical and horizontal alignment of your tools.*



**ATTENTION :** *It is important to draw all of the tools with a black outline with a medium width outliner set at either 1 or 2 pixels. To adjust the outline, you must adjust the parameters in the "FILL AND STROKE" menu. See step 3.5.*



4.1.2. The "BEZIER"  function is also located on the left side tool bar. This function allows you to alternate between drawing lines and curves. It is a little more complex to use but the results are much more interesting. It is recommended to learn how to use this function. In addition, the cutting machine for the foam inserts reproduces these lines exactly as you draw them. This means that if a shape is represented by a series of small straight lines created by using the "LINES"  function, the machine will cut the curve with a series of small straight lines. If the curve is perfect, the machine will cut a perfectly curved line.



**Tip : Trace an outline (quality)**

The exactness of the drawing will be reproduced as it is by the cutting machine for the foam inserts. For example: a curved line comprised of a series of small straight lines will be reproduced as such on the foam. Therefore, it would be more appropriate to trace a curved line. Example no. 2: an unfinished line will be cut as an unfinished line on the foam.

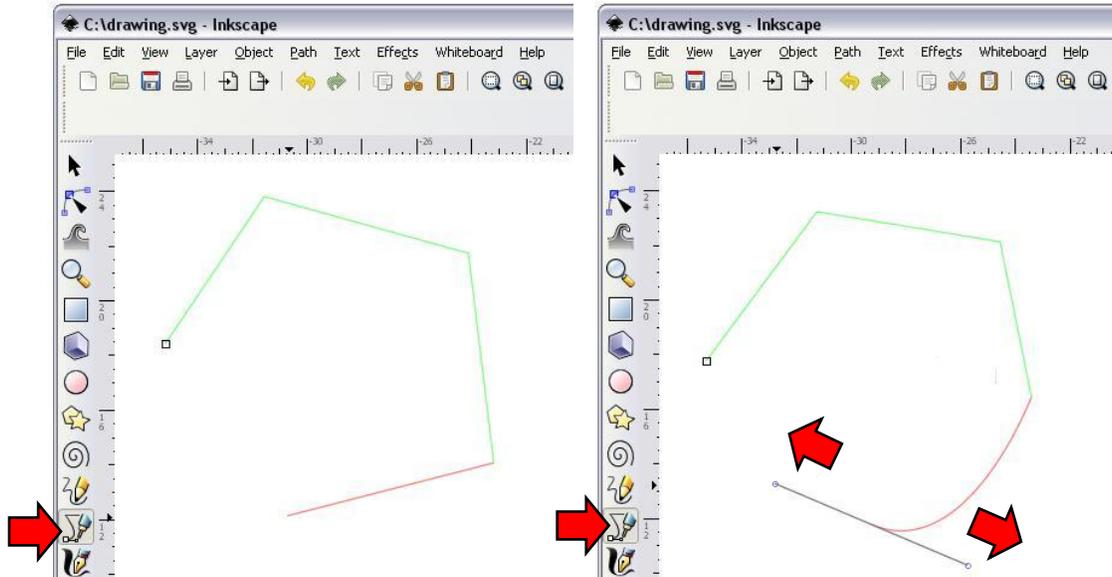
4.1.2.1. As with the "LINES"  function, the "BEZIER"  function allows you to draw straight lines by clicking two different points on the photo. However, as long as the line and the "BEZIER"  function are selected, it is possible to continue with a new line which will automatically be attached to the first line without having to re-click on the point where the preceding line ended. The function remains in action until unselected.

4.1.2.2. To finish a group of lines, simply double click at the same time as creating the last segment and indicating the last point of the line for the item you are drawing. It is also possible to end the function by hitting "ENTER" on the keyboard.

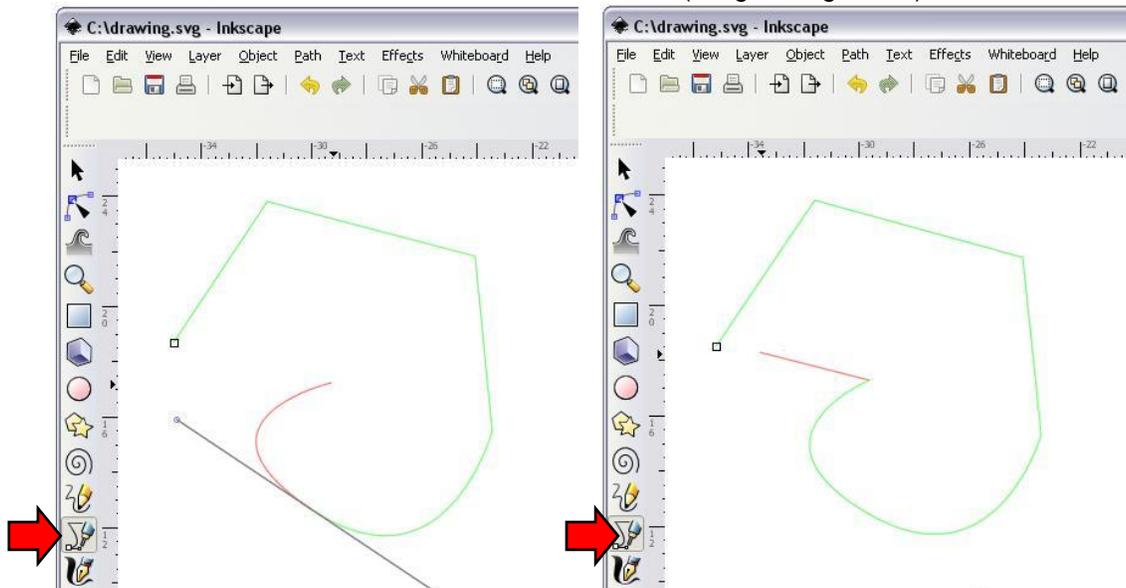


4.1.2.3. The "DELETE" key on the keyboard allows you to delete the last segment of line while the line and the "BEZIER"  tool remain selected.

4.1.2.4. The "BEZIER"  tool also allows you to draw curved lines. To use this function, simply **hold the left button on the mouse** while clicking to indicate the end of a line. You will see two collinear opposite handles. It will be possible to pull the line into the desired curve without changing the start and end points. Simply let go of the mouse button once the desired curve has been created.

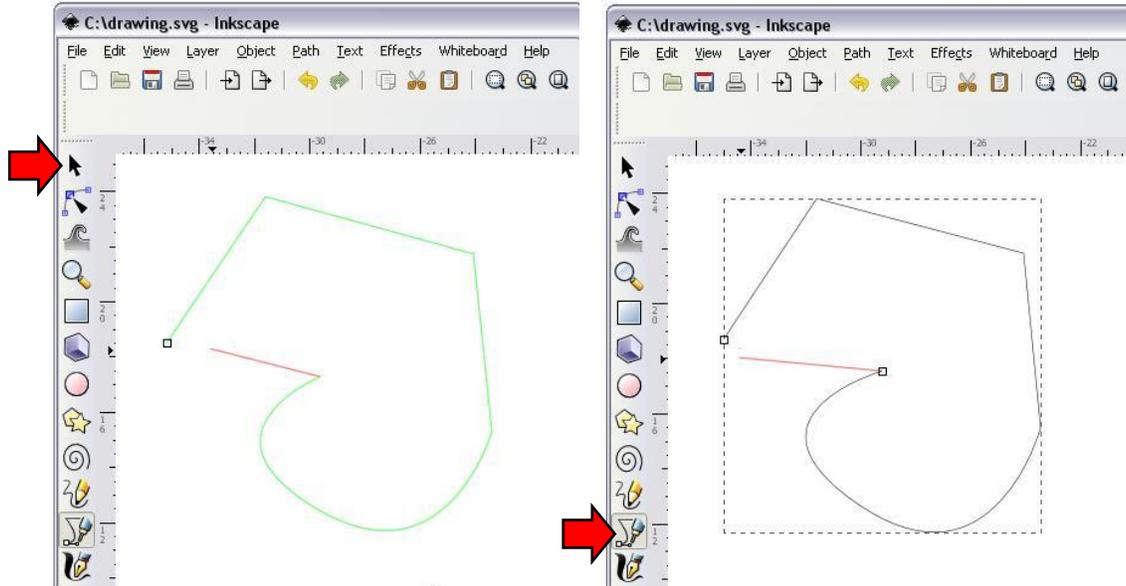


4.1.2.5. After the first curve, the program will automatically propose a way in which you can continue with a new tangent curve that is complementary to the first (image on left side). If you accept the second curve, the function falls back to the line mode (image on right side).

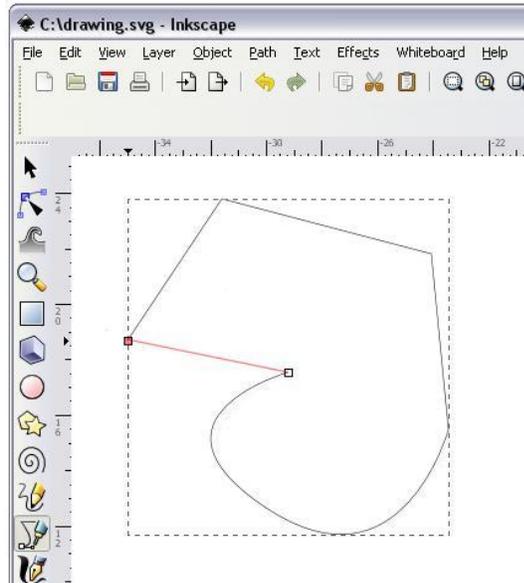


4.1.2.6. To create a new curve, simply click on a point where you'd like to start the new line and pull the line while holding the left button on the mouse as you did for the first curved drawn in previous point.

4.1.2.7. If you do not wish to continue in curve mode after the first curve or if the second curve that is automatically suggest is not what you want, simply click on the drawing with the left button on the mouse. It is possible to end this function by hitting the "ENTER" key on the keyboard. This will automatically put and end to the line. It will then be possible to start a new line from the existing line. If you have exited the "BEZIER" function , ensure that you have selected the existing line with the "SELECT AND TRANSFORM" arrow  and then select the "BEZIER" function  (right image). Click on the last node of the previous line to continue the line.



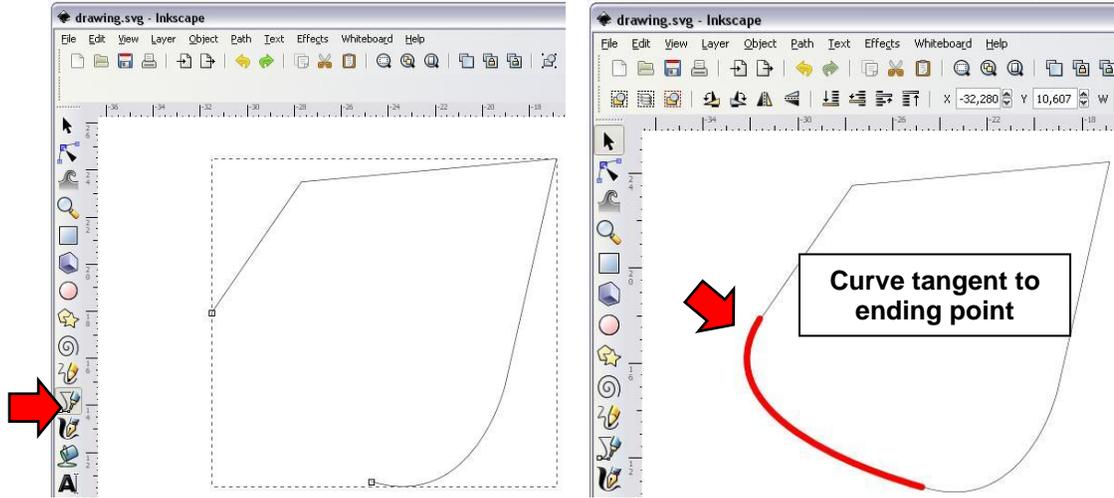
4.1.2.8. To close a shape, click on the original departure point of the shape.



4.1.2.9. It is possible to modify a shape after it has been created. Double-click on the image. Once you do that, the nodes for the shape will appear and you can then change the shape.

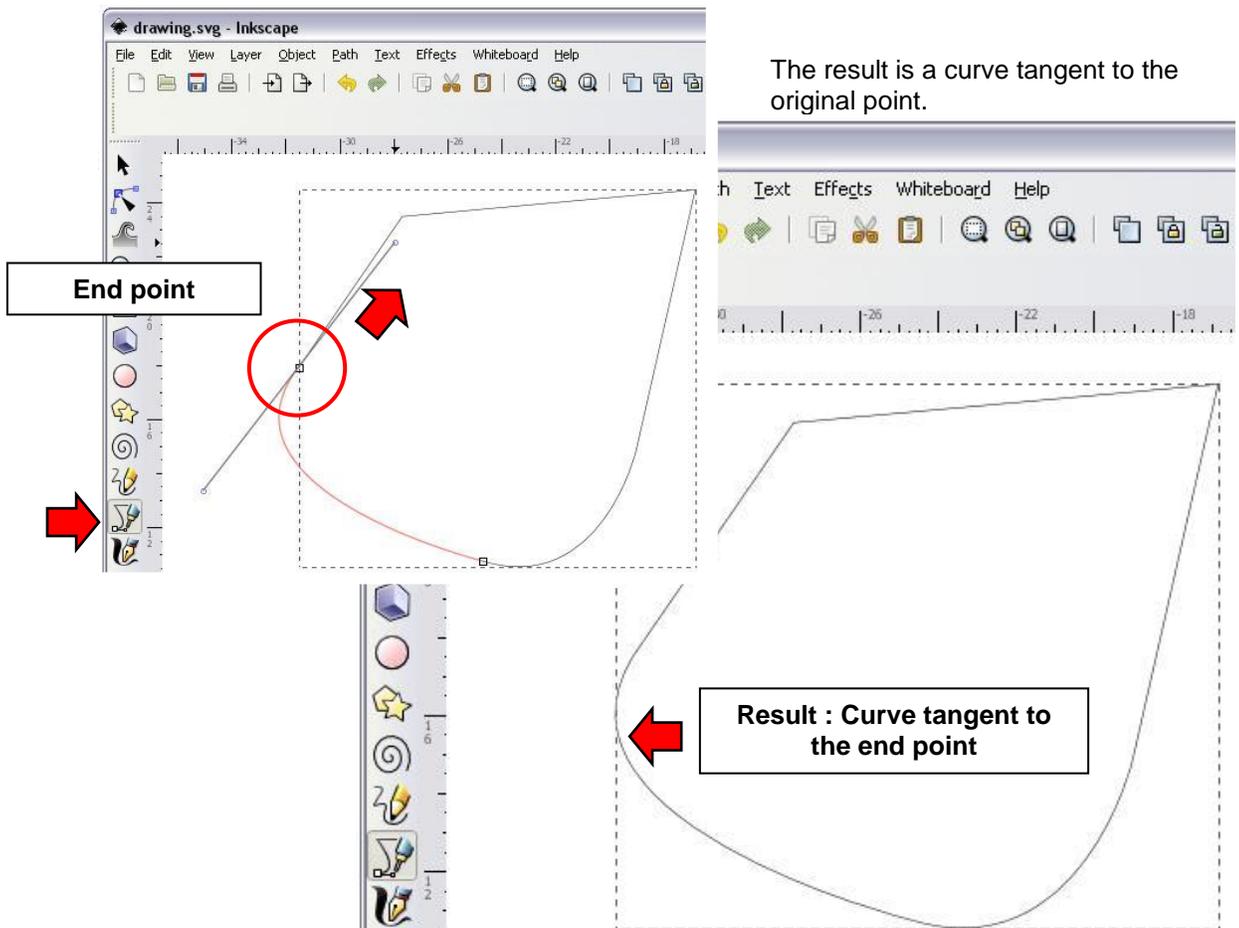
### Initial unfinished shape

### Desired shape (curve shown in red)



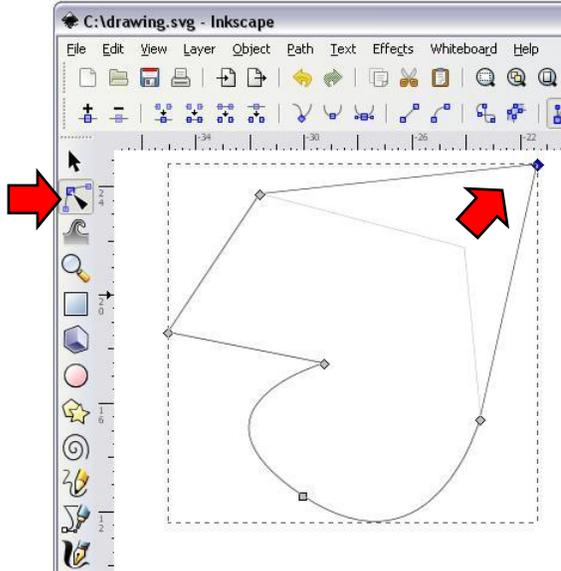
If you have exited the "BEZIER" function , ensure that you have selected the existing line with the "SELECT AND TRANSFORM" arrow  and then select the "BEZIER" function .

After having clicked to indicate the starting point of the new curve, click on the point where the curve end while holding the left button on the mouse and dragging in the same direction as the line segment on which you just attached the curve.

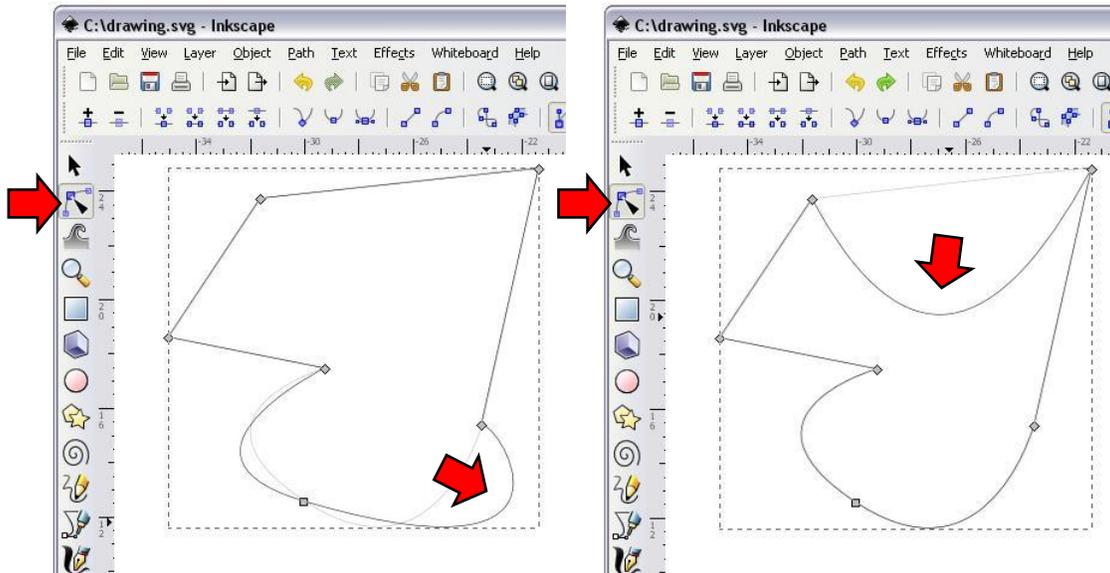


4.2. It is possible to modify a shape after it has been created. Double-click on the image. Once you do that, the nodes for the shape will appear and you can then change the shape.

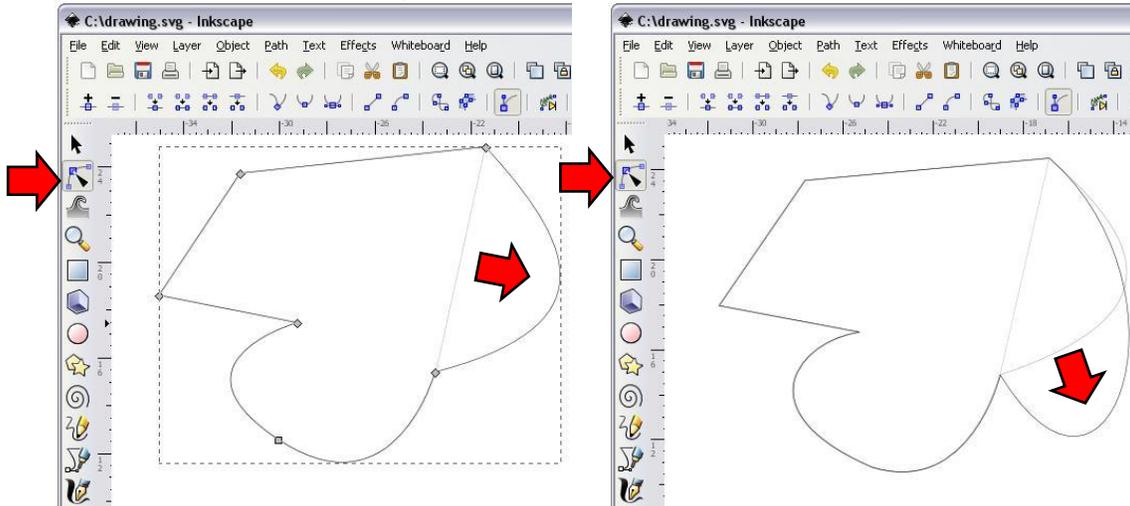
4.2.1. It is possible to move a node. To do this, first double-click on the line using the "SELECT AND TRANSFORM" arrow . Then, click for the first time on the node to be moved in order to select it. Finally, while holding the left button of the mouse on the node that was selected, you can move it. Keep in mind that you must select only one node at a time otherwise the nodes selected will all move at the same time. When you move a node, the two lines that are attached to it will remain straight lines.



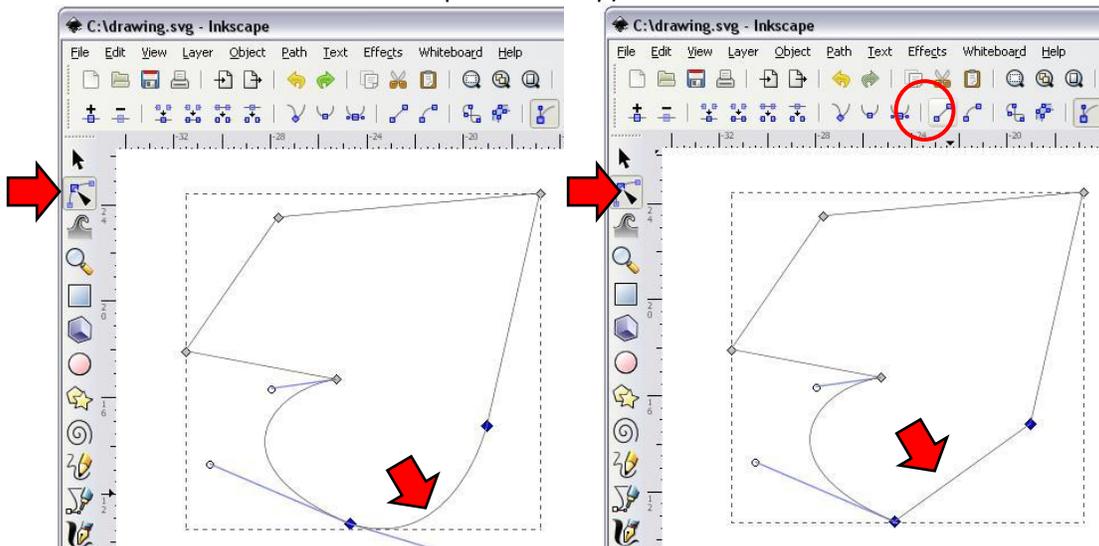
4.2.2. It is possible to modify an existing curved line (left side image) or to change a straight line into a curved line (right side image). To do this, first double-click on the line with the "SELECT AND TRANSFORM" arrow . Then, while holding the left button of the mouse down and above the line to be modified, you move the line.



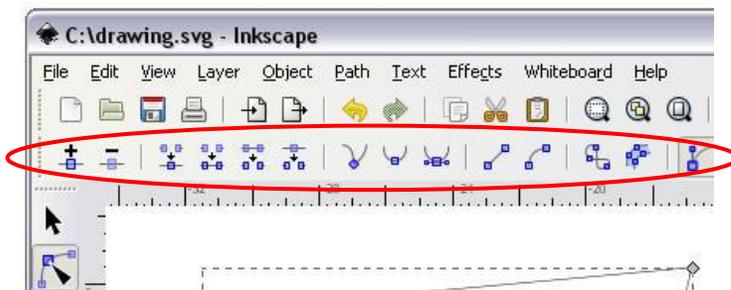
4.2.3. It is possible to change the curve on a line by pulling the at different spots along the line until you reach the shape you are looking for. To do this, simply double-click on the line using the "SELECT AND TRANSFORM" arrow and pull.



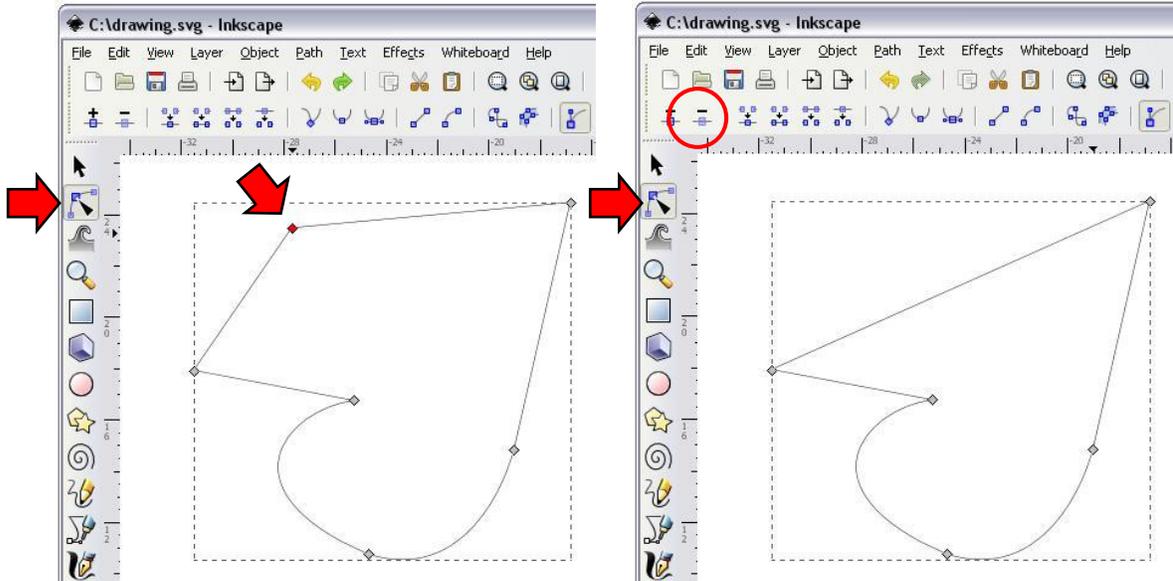
4.2.4. It is possible to change a curved line into a straight line. To do this, first double-click on the line using the "SELECT AND TRANSFORM" arrow. Then, select the segment of the line that you wish to change and use the "LINE" conversion option in the upper tool bar.



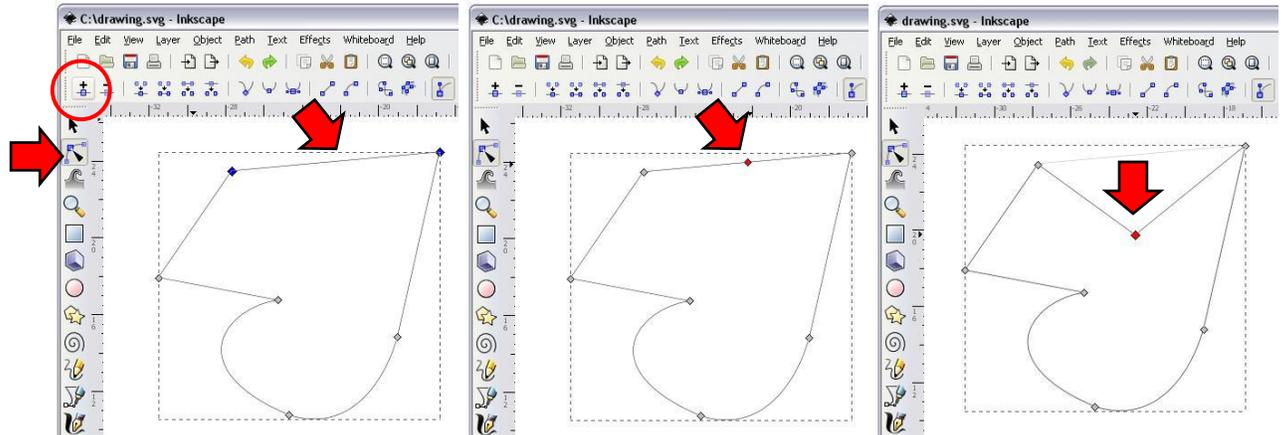
4.2.5. There are many other editing options available, all of which are located on the upper tool bar. It is recommended to explore the options.



4.2.6. It is possible to delete a node on an existing line. To do this, first double-click on the line using the "SELECT AND TRANSFORM" arrow . Then click on the node you want to delete and hit the "DELETE" key on your keyboard or click on the "-" symbol that you see circled in the image on the right side here below.



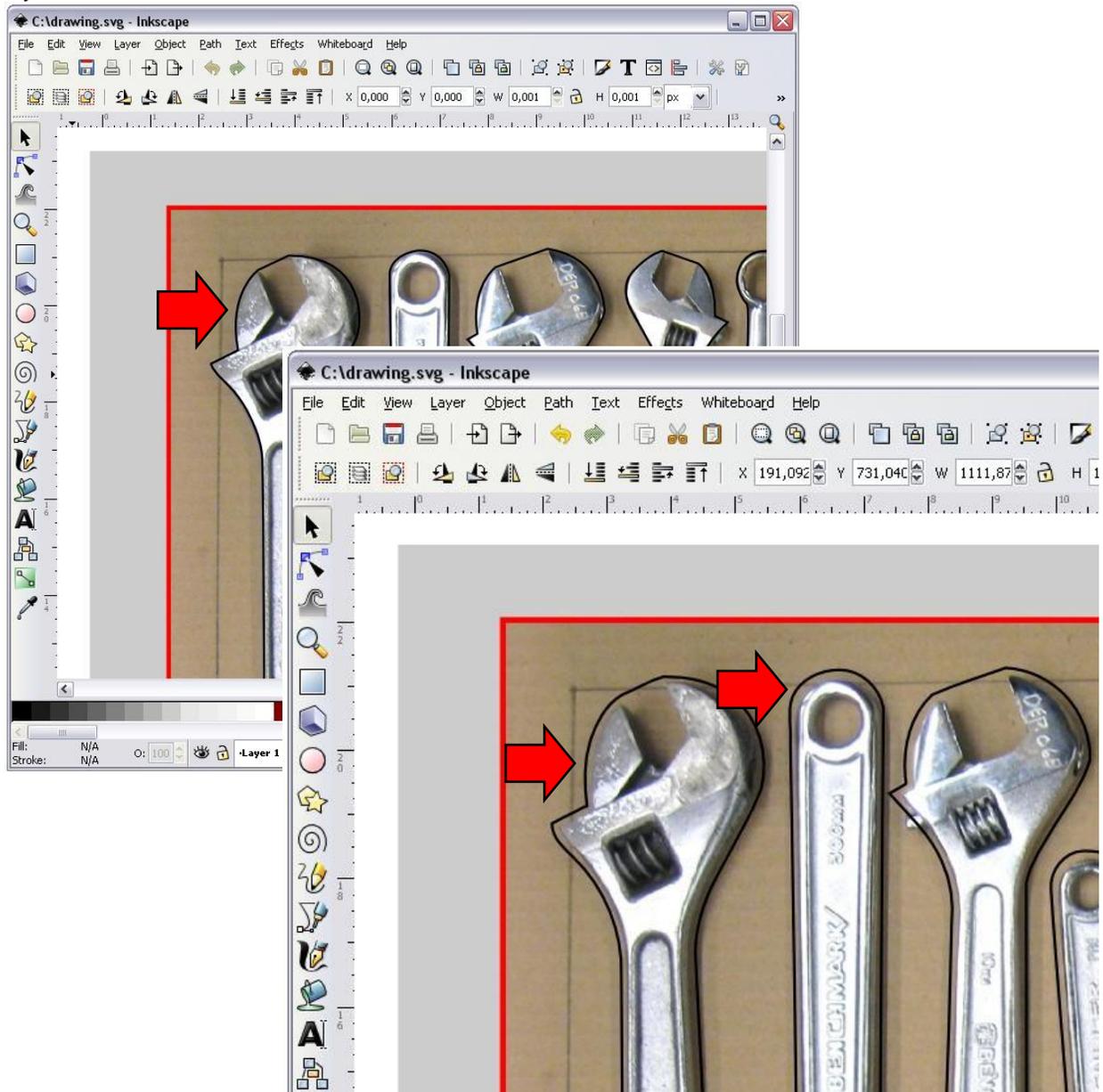
4.2.7. It is possible to add another node to an existing line. To do this, first double-click on the line using the "SELECT AND TRANSFORM" arrow . Then, double-click on the line at the spot where you wish to add the node and a new node will appear. The shape can be modified from this node. It is also possible to click once on the line (once you have selected it) and then to click on the "+" symbol.



4.3. Save the document.

4.4. Once the drawing of the tools is completed, it may be appropriate to enlarge each tool outline. This will provide a little bit of extra space around each tool. It may also compensate for any small errors on the drawing. It is not required to use this option in each and every situation, it may be preferable that the tools have a tighter fit in the foam.

4.4.1. To do this, you must first click on the line using the "SELECT AND TRANSFORM" arrow . Then, from the "PATH" menu, select the "OUTSET" option. There is a shortcut for this operation : "CTRL+). However, this shortcut may not work on all computers. This function allows you to blow up a tool outline. It is possible to repeat the function as many times as needed until the desired shape is achieved. It is recommended to leave the photo under the drawing in order to see how much room you have on the layout.



4.5. Save the document.



**ATTENTION** : It is important to respect the minimum requirements for spacing around tools:

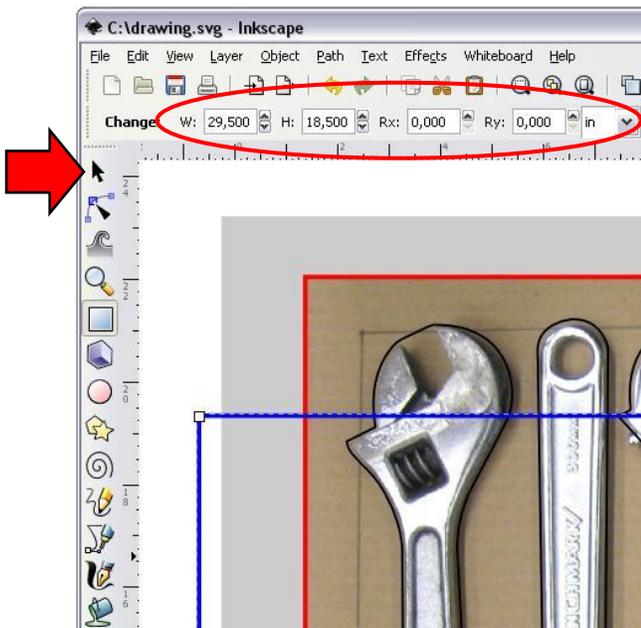
- Keep a 1" border around the entire rectangle that has the same dimensions as the foam.

### 5. Verifying the space around the tools

- 5.1. Select the first rectangle you created which surrounds the entire tool layout by using the "SELECT AND TRANSFORM" arrow .
- 5.2. Copy the rectangle by using CTRL+C (COPY) followed by CTRL+V (PASTE).
- 5.3. It is recommended to change the colour of the outline on the rectangle by using the "FILL AND STROKE" function. Select the rectangle using the "SELECT AND TRANSFORM" arrow . Once the rectangle has been selected, position the mouse above the outline of the rectangle and click with the right button on the mouse, a drop down menu will appear. Select the "FILL AND STROKE" option.
- 5.4. Double-click on the new rectangle with the "SELECT AND TRANSFORM" arrow . In the upper tool bar, adjust the dimensions of the rectangle by changing the numbers in the provided fields. The new rectangle should be 2" less wide and 2" less high than the original in order to create a 1" margin around the entire tool layout (W=width and H=height).

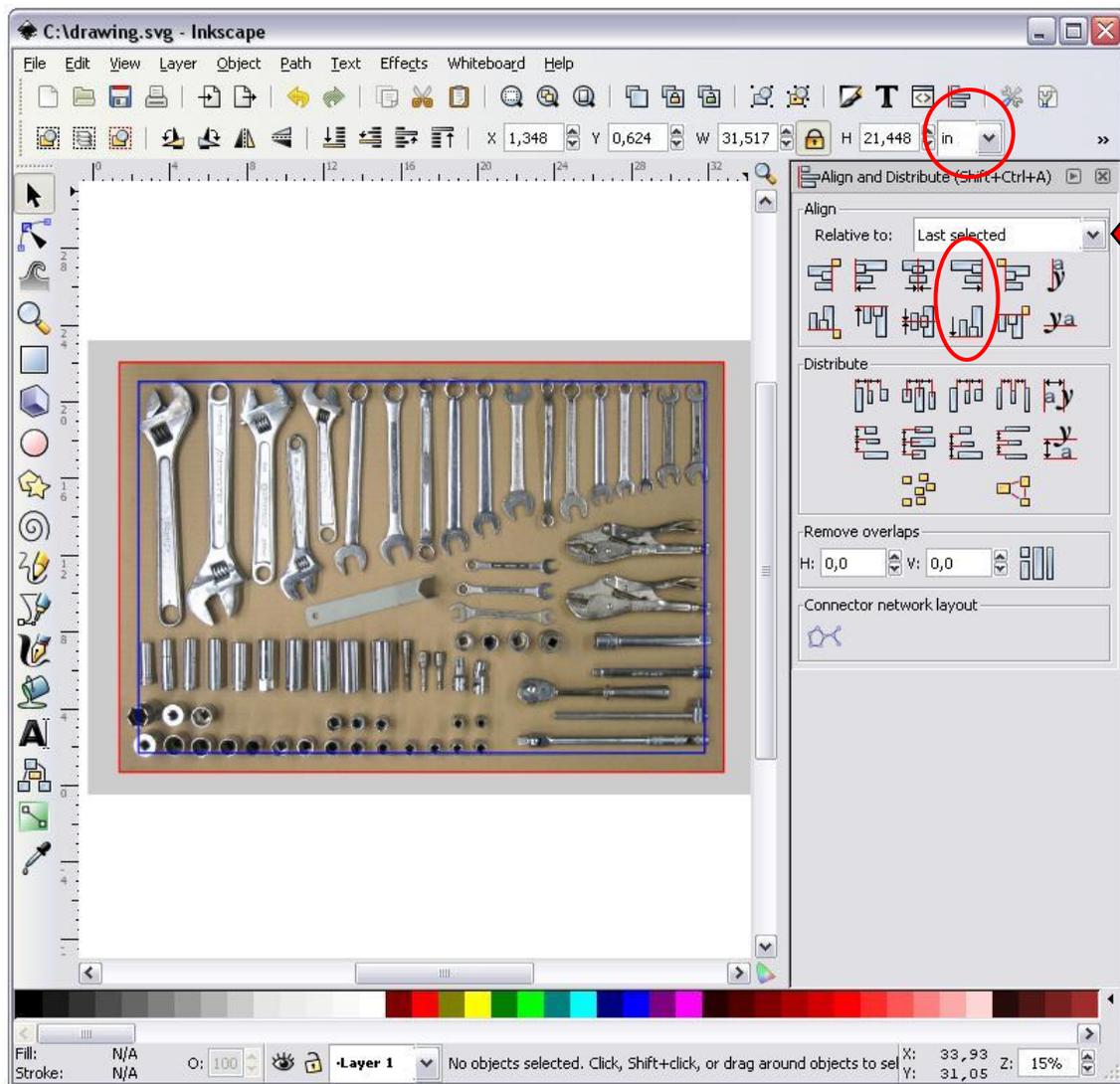
Ex: W:  H:

- 5.5. You must be sure that the units of measurement are in inches. By default they are expressed in pixels (px).

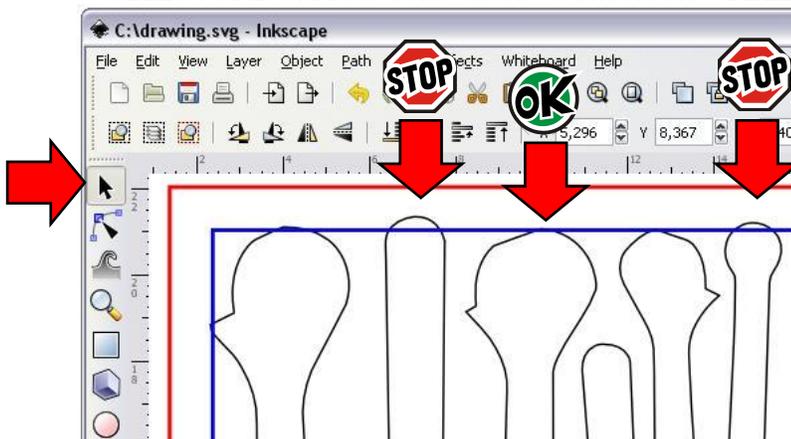


- 5.6. Center the new rectangle (the smaller one) over the first rectangle (the larger one).

- 5.6.1. Select the smaller rectangle using the "SELECT AND TRANSFORM" arrow .
- 5.6.2. Hit and hold the "SHIFT"  key and select the larger rectangle with the "SELECT AND TRANSFORM" arrow .
- 5.6.3. Click on the "ALIGN AND DISTRIBUTE"  option located in the upper tool bar.
- 5.6.4. In the "ALIGN AND DISTRIBUTE" menu, align the rectangles RELATIVE TO "LAST SELECTED"  and then select "CENTER ON VERTICAL AXIS"  followed by "CENTER ON HORIZONTAL AXIS" . The two rectangles should now be centered.



5.7. Now you must ensure that no part of the tool outlines are sitting outside of the smaller rectangle. If any are, you must reposition the affected tool outlines. Delete the photo of the tools first: Select the photo with the "SELECT AND TRANSFORM" arrow and hit the "DELETE" key.



5.8. Save the document.

### 6. Adding elements for an ergonomic grip on tools

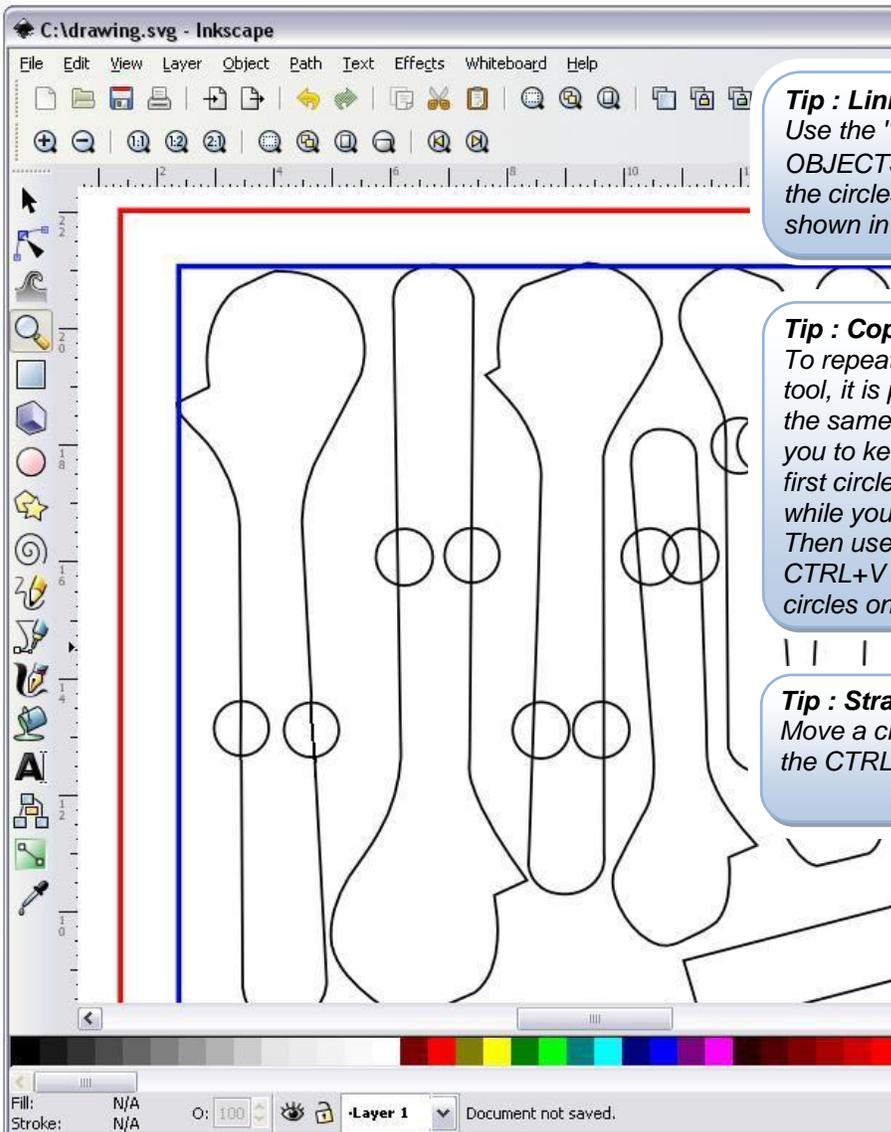
- 6.1. Target the tools on which you want to add ergonomic grips.
- 6.2. Draw a circle with the "CIRCLE"  function. Click on the circle using the "SELECT AND TRANSFORM" arrow . In the upper tool bar, adjust the dimensions of the circle by changing the numbers in the fields provided. For example, a circle with a 1" diameter, type 1" in the "W" field for the width and 1" in the "H" field for the height.



- 6.3. You must be sure that the units of measurement are in inches. By default they will be expressed in pixels (px).



- 6.4. Place the circle on the correct tool on the drawing.
- 6.5. You can add as many circles as you wish by selecting the first circle with the "SELECT AND TRANSFORM"  arrow and using command CTRL+C (COPY) followed by CTRL+V (PASTE).



#### Tip : Ergonomics

It is recommended to consider adding ergonomic grips around the tools in order to facilitate handling. You can simply add 1" semi-circles on each side of the tool.



#### Tip : Lining the circles up

Use the "ALIGN AND DISTRIBUTE OBJECTS"  function to correctly position the circles in relation to each other. As shown in point 7.5.4.



#### Tip : Copy several circles

To repeat the same circle layout on a new tool, it is possible to copy both circles at the same time. Copying both circles allows you to keep the same spacing. Select the first circle and hold the "SHIFT"  key while you then select the second circle. Then use the CTRL+C (COPY) and CTRL+V (PASTE) functions to place the circles on the next tool.



#### Tip : Straight angle movements

Move a circle at a straight angle by holding the CTRL key while moving it.



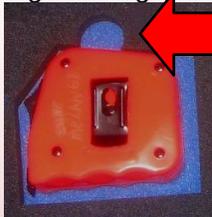


### ATTENTION : Ergonomic grips not always required

Adding ergonomic grips around tools can be very useful in certain cases however, one must be careful because they may not be useful in every case. In fact, they may even get in the way in some cases.

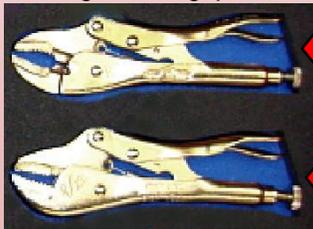
#### Example no.1 : A tool that is more than 1" high placed on a cut foam insert 1/2" high.

In this case, seeing as the tool is higher than the foam insert, it is easy to grip without the help of an ergonomic grip.



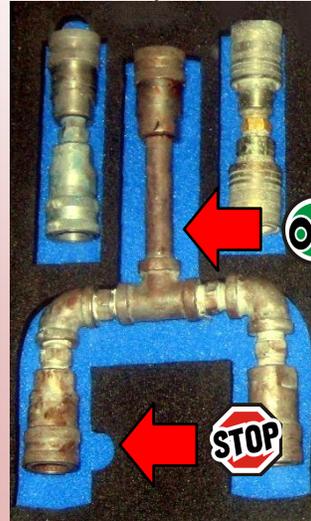
#### Example no.2 : A tool like a pair of pliers

A shape with an empty section due to the shape of the tool allows for easy handling without having to add ergonomic grips.



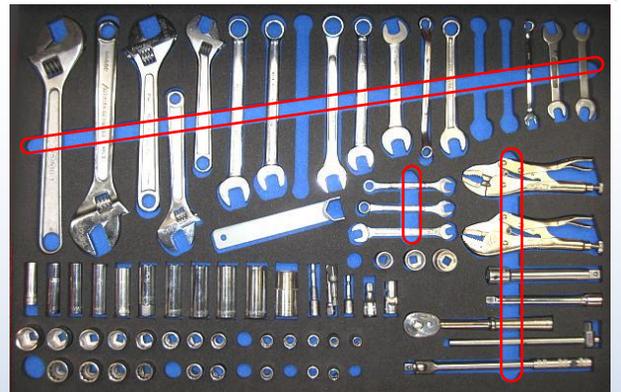
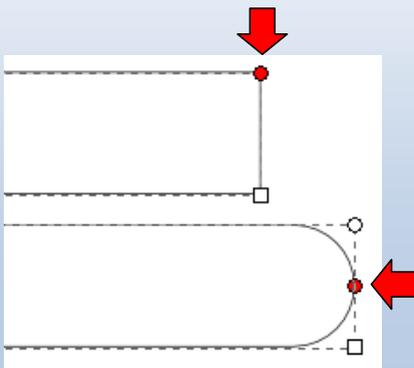
#### Example no.3 : A tool with a lot of space around it.

In certain cases, using foam inserts is to visually facilitate locating tools (5S application). In these situations, some people will prefer to leave extra space around the tools. In these cases, it may not be necessary or useful to add ergonomic grips.

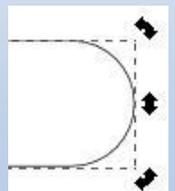


### Tip : Alternative ergonomic grip

Another method for adding an ergonomic grip is to draw a rectangular shape with rounded ends which passes through the entire series of tools. To do this, draw a rectangle and adjust the dimensions to those required. By clicking on the rectangle with the "RECTANGLE" function , it will go into edit mode and it will be possible to round the ends starting from the corner with the small circle. You can simply slide the small circle along the horizontal or vertical and the corner will round.



To pivot the rounded rectangle, select it with the "SELECT AND TRANSFORM" arrow  and click on the rectangle twice, the rotation arrows will appear. Simply pivot your object using the arrows.





**ATTENTION :**

*It is important to respect the minimum spacing requirements around the tools :*

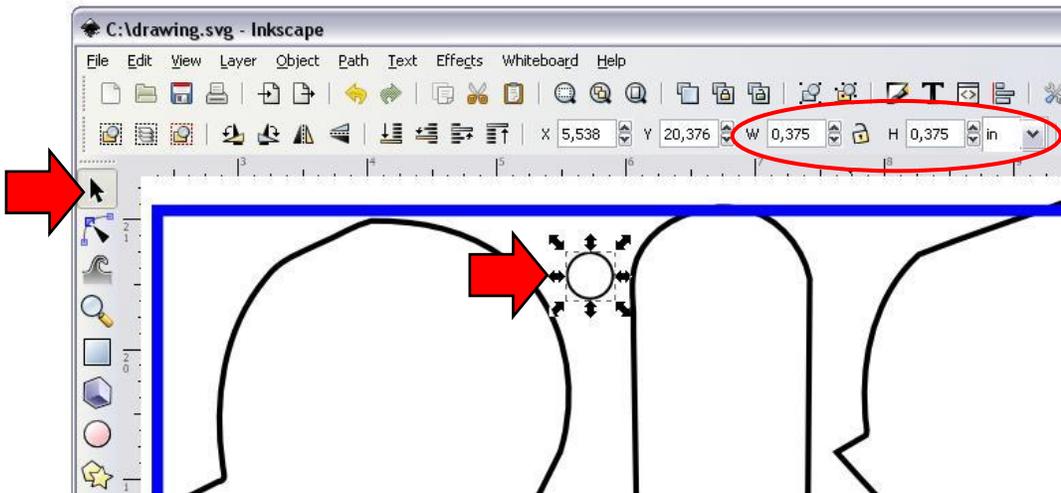
- 1/2" thick foam : 1/4" to 3/8"
- 1" thick foam : 3/8" to 1/2"

**7. Verifying the space between the tools**

7.1. Draw a circle with the "CIRCLE"  function. Click on the circle using the "SELECT AND TRANSFORM" arrow . In the upper tool bar, adjust the dimensions of the circle by changing the numbers in the fields provided. For example, a circle with a 0.375" diameter, type 0.375" in the "W" field for the width and 0.375" in the "H" field for the height.

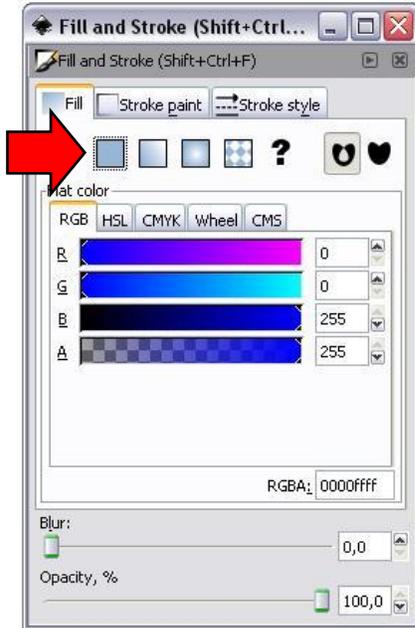


7.2. Please ensure that the units of measurement are in inches. By default they appear in pixels (px).

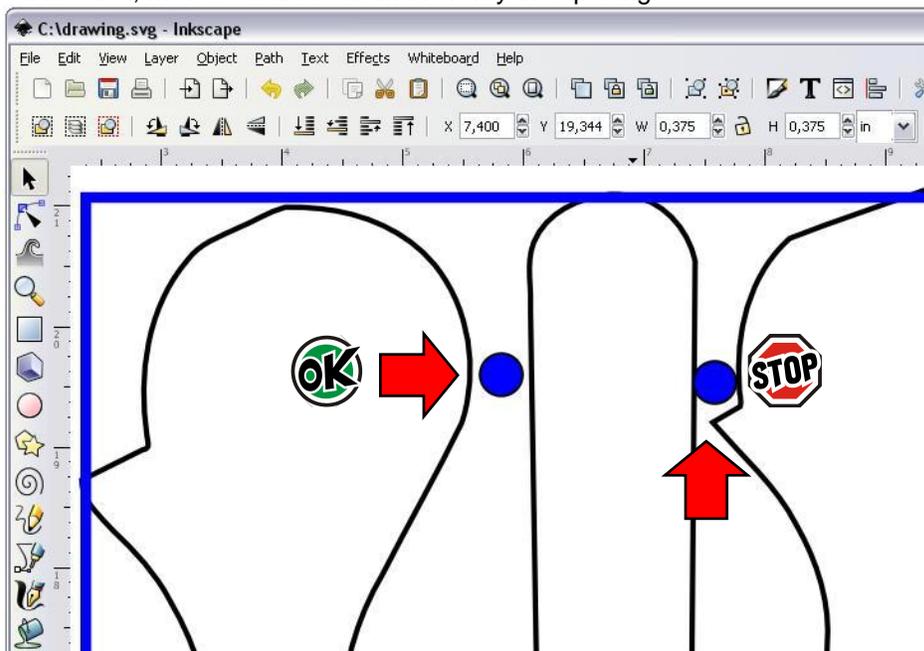


7.3. Once you have drawn the circle, you must ensure that it is in the foreground (please refer to point 3.10).

- 7.4. It is recommended to fill the circle with a colour from the "FILL AND STROKE" menu. Select the circle with the "SELECT AND TRANSFORM" arrow . Once you have done this, place the mouse above the circle contour, click on the right button on the mouse and you will see the drop-down menu appear. Select the "FILL AND STROKE" option. All that remains is for you to select a colour.



- 7.5. Use the "SELECT AND TRANSFORM" arrow  to move the circle over the tool drawings. Seeing as the circle corresponds to the minimum spacing requirements, it is easy for you to verify the spacing that you have. If needed, move certain tools and reverify the spacing.



### 8. Exporting and verifying the drawings

- 8.1. Save this document in the program's standard format (.svg) on your hard drive if not already done.
- 8.2. Save the drawing in a "PDF" file.
- 8.3. Open the "PDF" file with a program that allows you to view this type of file (ex : Acrobat Reader) and ensure that the file is the same as your original drawing and is not missing any lines or tools.
- 8.4. Print the drawing from your drawing program or from Acrobat Reader. The goal of doing this is to simply verify the dimensions of a couple of the tools on the drawing.
- 8.5. If you do not have access to a large scale printer, it is often possible to print a section of the drawing on a standard size piece of paper.
- 8.6. It is recommended to print and verify several different types of tools. Please note that the scale should be 1:1.
- 8.7. If printing from Acrobat Reader :
  - 8.7.1. Open the file
  - 8.7.2. Select a drawing zone (draw a selection rectangle)
  - 8.7.3. Print the selected drawing zone. Check the appropriate option in the print menu.
- 8.8. Send your drawing in a "PDF" as well as the original "JPG" photo to your Rousseau customer service representative.



**ATTENTION : Your file must be named according to the following models**

*Project name or number – drawer dimensions(WWDDHH) – sequential numbers (01-02-03, etc.)*

**Example no1 :** *MLBodyShop-302703-01*  
*MLBodyShop-302703-02*  
*MLBodyShop-302704-03*

**Example no2 :** *DSHIndustries-362403-01*  
*DSHIndustries-362404-02*  
*DSHIndustries-362404-03*  
*DSHIndustries-362405-04*

**Example no3 :** *Project18A67-302703-01*  
*Project18A67-302703-02*