



Learn and be inspired.

Multiple Openings: 121

Aligning & Spacing Openings

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Multiple Openings: 121

Aligning & Spacing Openings

We talk about how multiple opening designs are important, but until we understand how to position and align openings, the process of making these arrangements is incomplete.

A few simple projects will demonstrate the tools. Every process is easier to understand when you see it in action.

Project 1

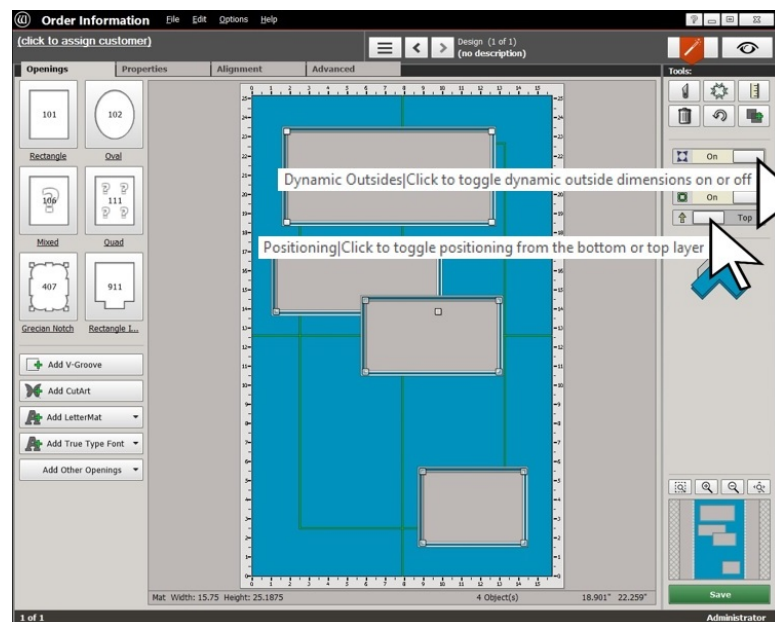
The first project is a column of 4 different sized openings.

They are all 2-layer rectangles with a 0.1875 inch reveal.

We want them spaced 0.625 inch apart—measured on the top layer.

We want to see the alignment buttons in action to make automatic vertical arrangements.

And we want the outside to be calculated for us without too much arithmetic so that we can begin cutting quickly.



Note: at the right under **Tools**, **Dynamic Outsides** is activated. Also note that the arrow on the **Positioning** button below is pointing up, indicating that the top layer is the reference point for the alignment tools.

Selecting Multiple Openings

Select all 4 openings. There are several ways to do this.

- ▶ Select them one-by-one, holding the **Control** or **Shift** key.
- ▶ **Control+A** on the keyboard selects all the openings.
- ▶ You can also drag a box around the openings.



In FrameShop, if you drag a box to select items, if any portion of an opening is inside the box, the opening becomes selected.

In this illustration, all the openings have the white squares at their corners—indicating that they have all been selected.

Beginning with the Alignment Tools: Spacing

- ▶ Click the **Alignment** tab at the top.

At the top left, are the **Spacing** buttons.

- ▶ In the field beside the **Space Vertically** button, enter 0.625 inch.
- ▶ Click the **Space Vertically** button.

The openings will be spaced vertically 0.625 inch apart—as measured on the top layer.

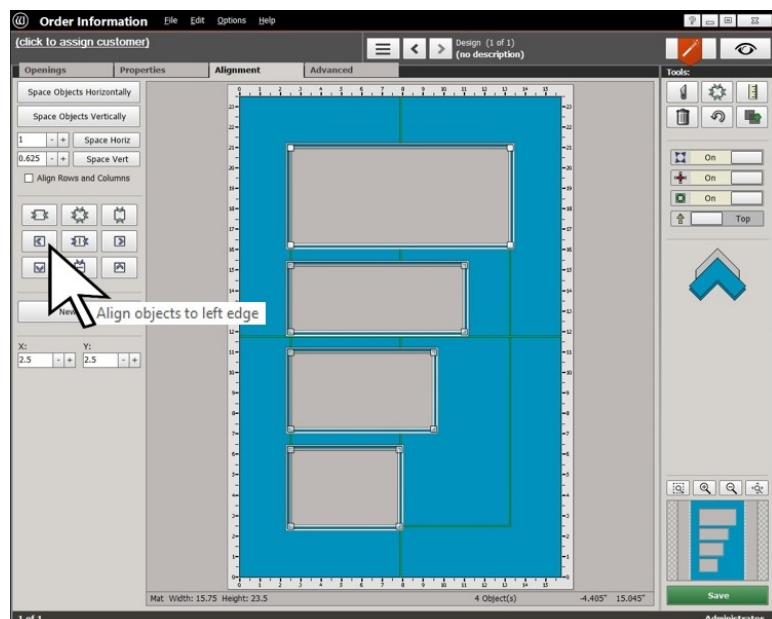
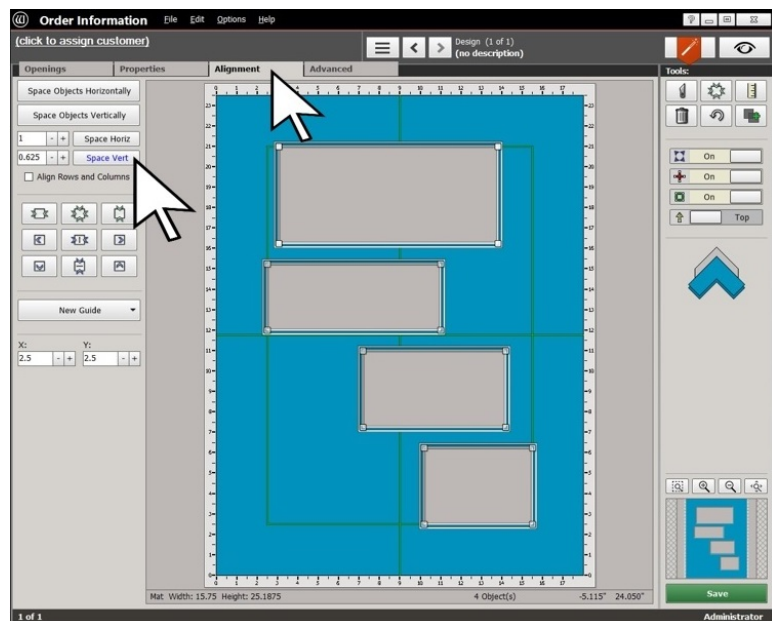
However, the openings are still haphazardly arranged horizontally. We will see options for fixing that next.

The Aligning Buttons

At the left, below the **Spacing** section, in the **Aligning** section there are 9 buttons.

Hover over each button to see a “tool tip” that describes its function. The buttons in the middle row will help with the vertical arrangement in this project.

Click the button at the left on the middle row—**Align Objects to Left Edge**.

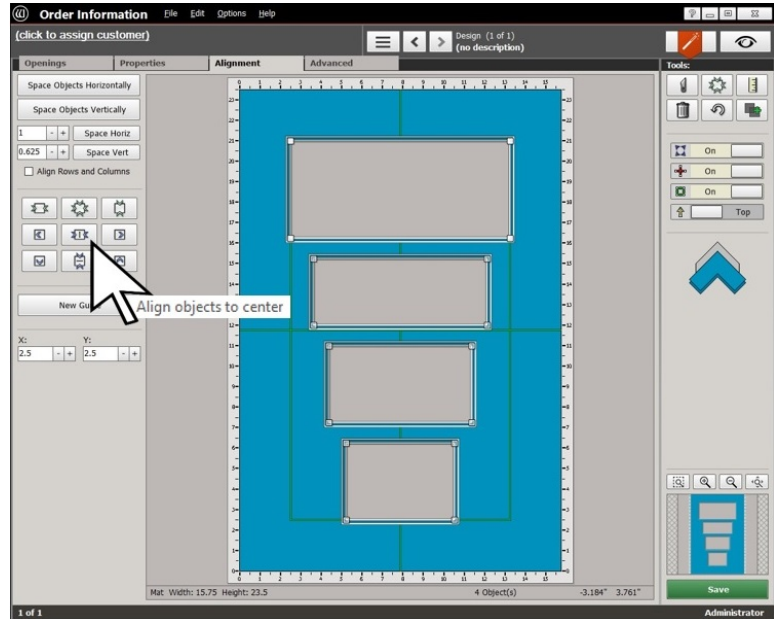




This forms an orderly asymmetrical modern arrangement.

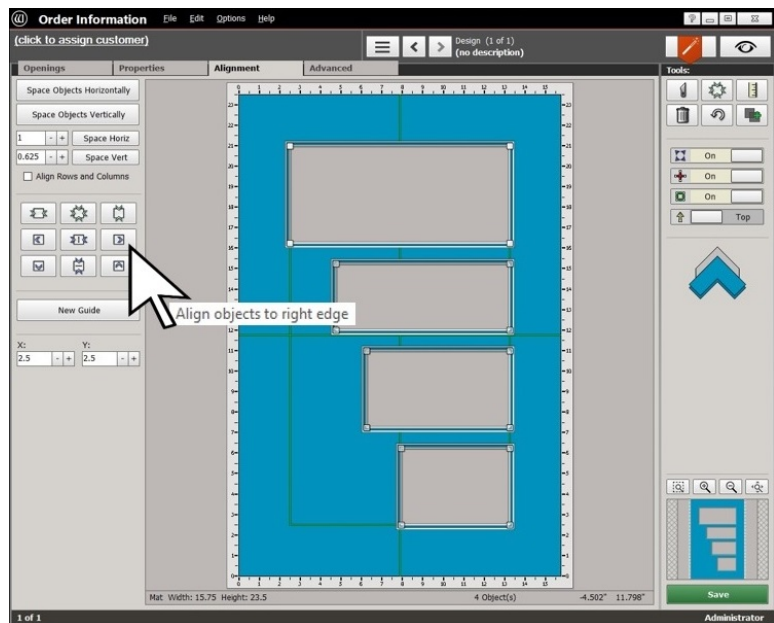
- ▶ Now, click the middle button of the middle row—**Align Objects to Center**.

This is probably the most traditional arrangement.



- ▶ Now click the button at the right of the middle row—**Align Objects to Right Edge**.

Again, an asymmetrical modern arrangement, a mirror image of the first. This is the arrangement that will be perfect for this project.



The Outside Size

Through all 3 of these arrangements, **Dynamic Outsides** has been active.

The **Borders** have been set to the widths we want, so the outside size has been automatically calculated and set without any extra effort.

The mat is now ready to cut.

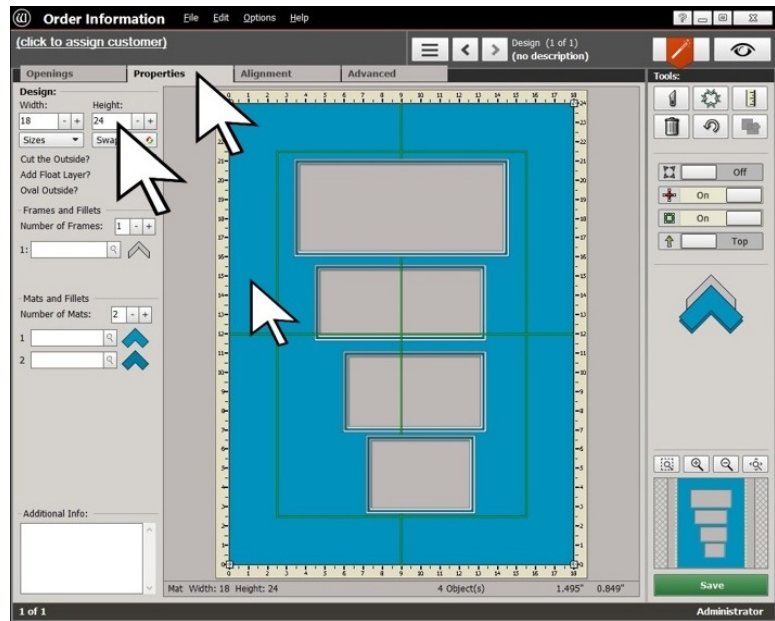


Project 2

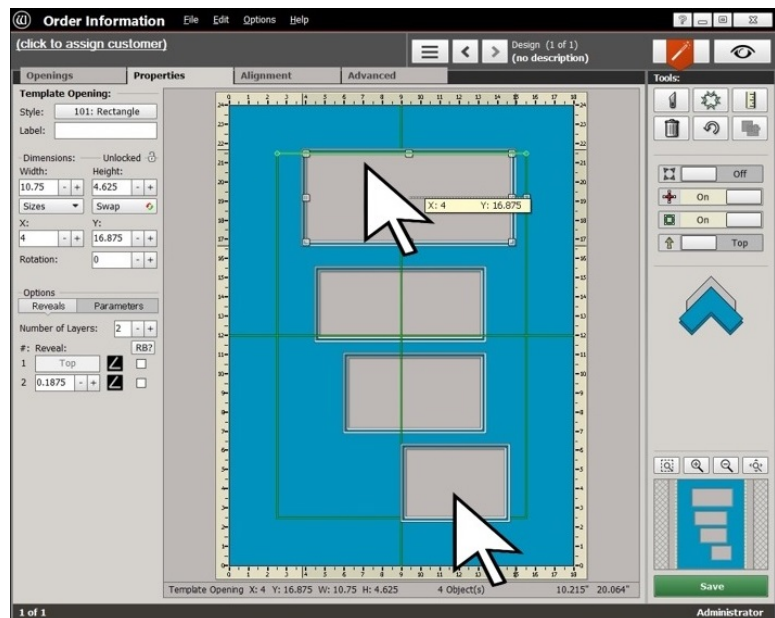
Here is another common multiple opening project that relates to the outside size. The customer has brought an 18 x 24 inch frame.

Our job is to cut a mat to fit these same 4 pictures inside this frame.

- ▶ De-activate **Dynamic Outsides**.
- ▶ Click the outside blue area of the mat.
- ▶ Click the **Properties** tab.
- ▶ Enter the 18 x24 inch outside size in the **Width** and **Height** fields.



- ▶ Drag the top opening and snap it to the top border.
- ▶ Drag the bottom opening and snap it to the bottom border.

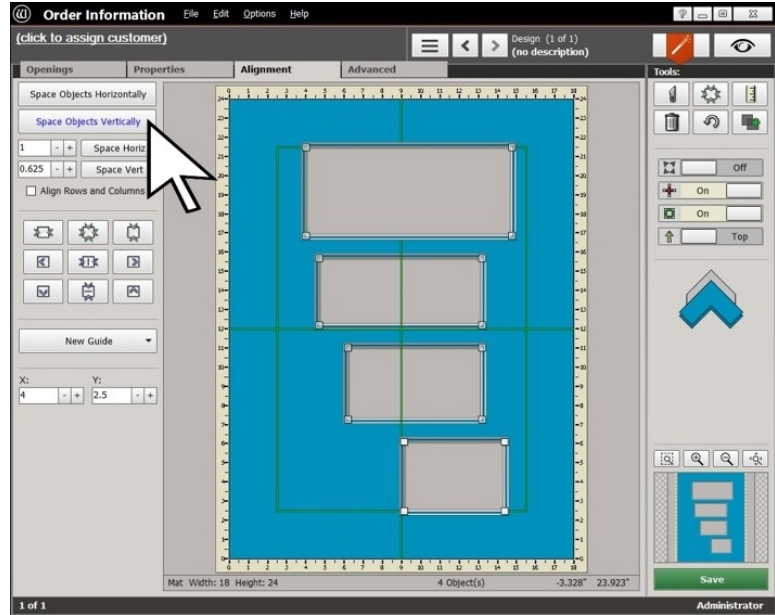




- ▶ Select all 4 openings.
- ▶ Click the **Alignment** tab at the top.
- ▶ Click the **Space Objects Vertically** button at the top left.

The other 2 openings will be evenly distributed in the space between the top and bottom openings.

However, the arrangement is a bit disorderly.

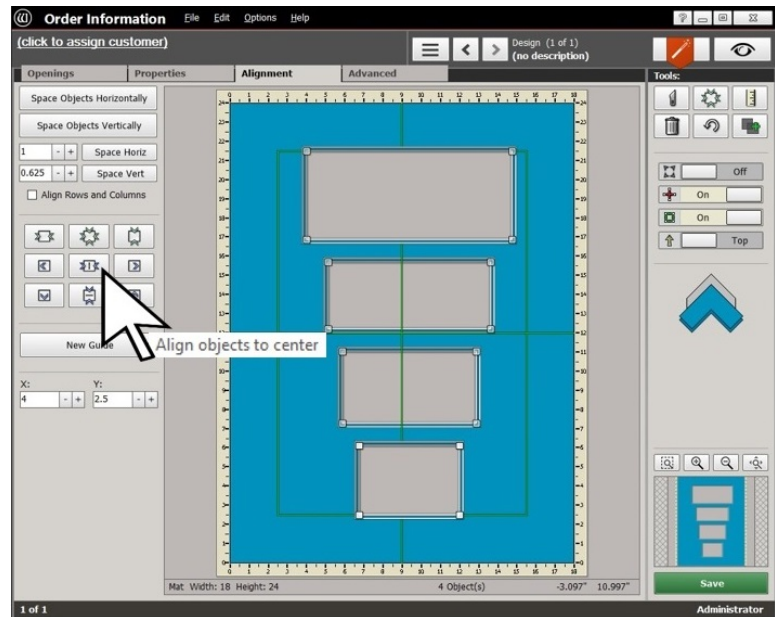


Make sure that all 4 openings are still selected.

Click any of the buttons in the middle row to tidy up the column — just as in the previous project.

This time, we have lined up the openings' centers to form a nice orderly column.

Note: the column of openings is not centered in the 18 x 24 inch outside size.



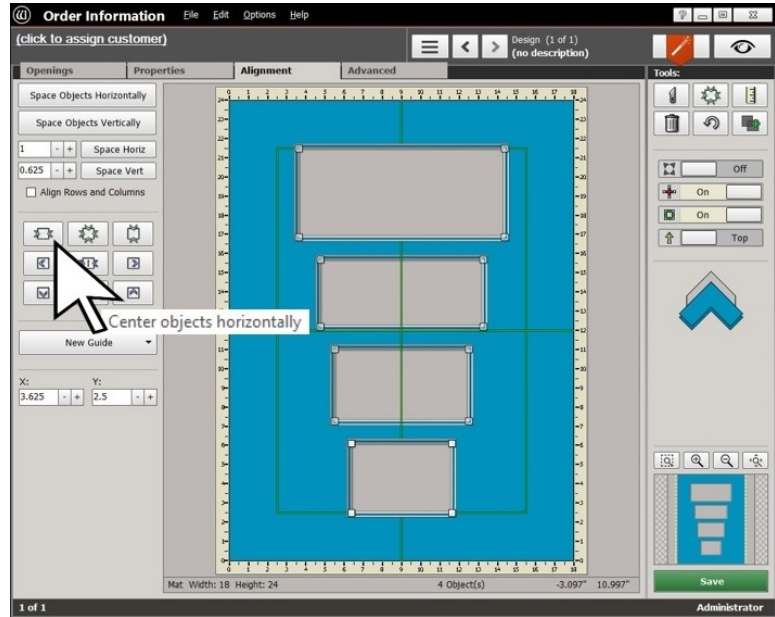


- ▶ To center the column in the middle of the frame horizontally, click the top left button of the 9 alignment buttons.

This is the **Center Objects Horizontally** button. It centers the selected object(s) horizontally, but maintains the vertical position.

These 3 buttons in the top row are quite useful.

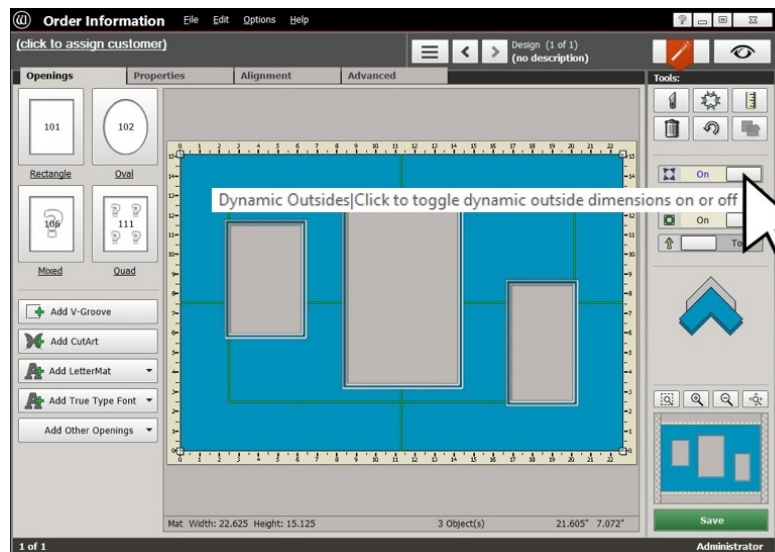
The right button of the top row centers objects vertically, but maintains the horizontal position.



The middle button centers the selected objects both vertically and horizontally in the frame.

This button is always available.

It is the middle button in the top row of **Tools** at the top right.



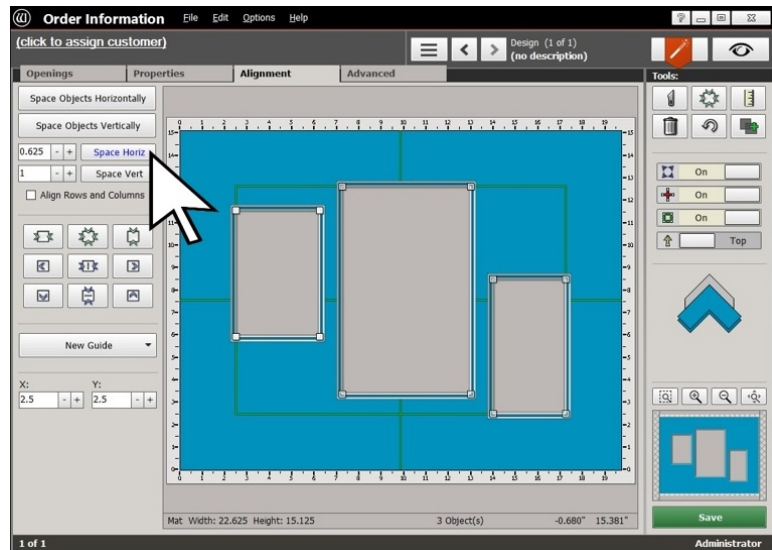


Project 3

A horizontal row of openings is another common assignment.

There is a large center opening with a smaller opening on each side. They are different sizes.

- ▶ Activate **Dynamic Outsides**.
- ▶ Select all 3 openings.
- ▶ Click the **Alignment** tab.
- ▶ In the field beside the **Space Horizontally** button, enter 0.625 inch.
- ▶ Click the **Space Horizontally** button.



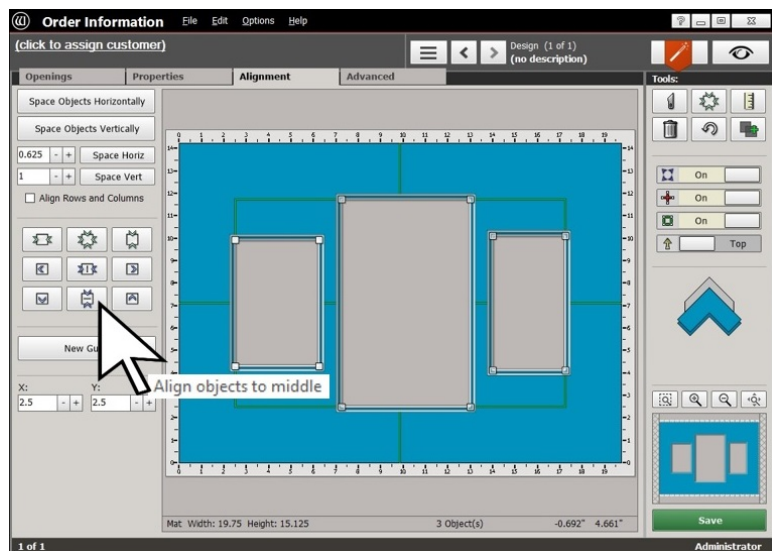
The openings will now be spaced horizontally 0.625 inch apart, but they will not be in a tidy row.

The bottom row of **Aligning** buttons arranges horizontal rows.

- ▶ Click the middle button—the **Align Objects to Middle** button.

The openings' middles will now be lined up—and **Dynamic Outsides** will automatically set the outside size.

The arrangement looks pretty good, and we could choose to cut it now.





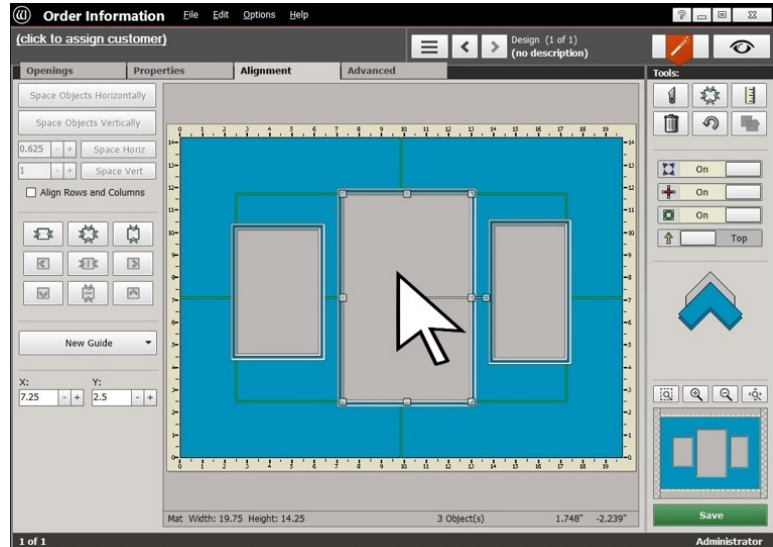
An Adjustment for Artistic Variation

We want the two openings at the sides to be a bit higher—simply to break away from the mathematically lined-up look.

- ▶ Select the large center opening.

We will move it down using the arrows on the keyboard.

Though we could move it by dragging it with the mouse, it is likely that it would accidentally move horizontally.



The arrow keys offer the assurance of moving it only in one direction. The arrow keys also move openings a set amount—1/16 inch with each click (1mm in metric).

Click the **Down** arrow key and observe the change. The large opening was moved 4 clicks lower—making the smaller openings 0.25 inch higher.

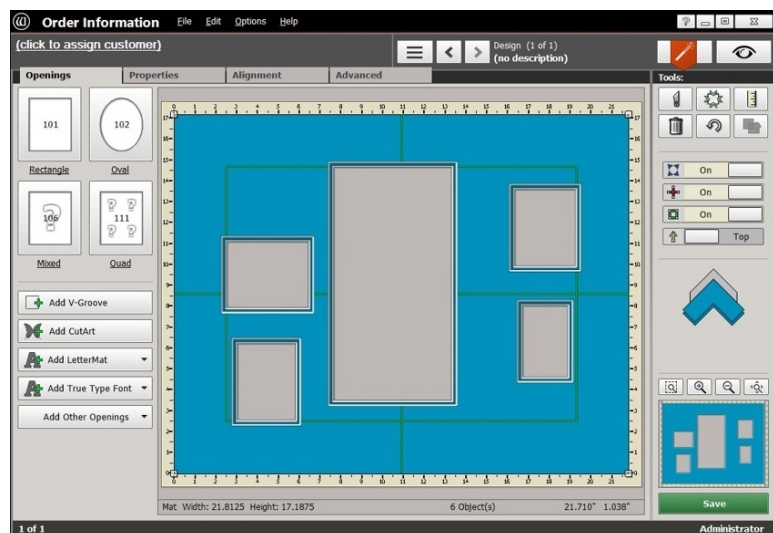
Project 4

A variation on this project is to have a column of 2 small openings on each side rather than a single opening.

The small openings in each column will be 0.625 inch apart vertically.

The openings on the left will have their right sides lined up.

The openings on the right will have their left sides lined up.





We know which buttons do this from the first project, but spacing the columns with the large center opening will not work. The 5 openings would be in one horizontal row.

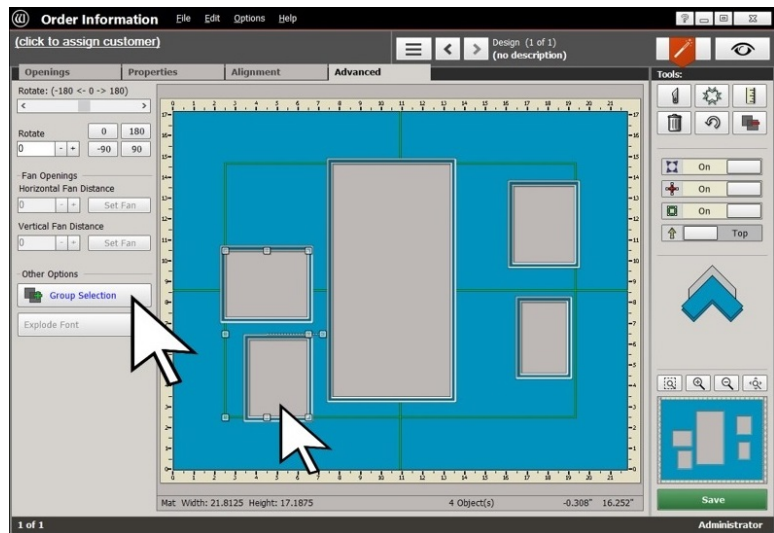
We will introduce a new tool—**Grouping**.

Grouping locks items together. The program then treats the group as one item.

Grouping the Left Pair

- ▶ Select the 2 small openings in the column at the left.
- ▶ Space them 0.625 inch apart vertically and use the **Aligning** buttons to line up their right edges.
- ▶ Click the Advanced tab at the top.
- ▶ At the left under Other Options, click the Group Selection button.

The 2 openings are now grouped and treated as one item.



The selection handles are now at the corners and center of the bounding rectangle of the group, rather than at each opening.

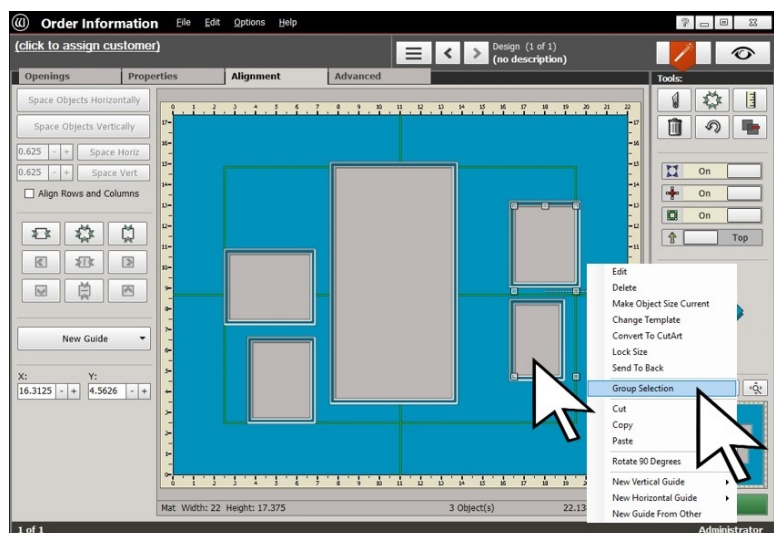
Grouping the Right Pair

- ▶ Now select the 2 small openings at the right. Space them and align their left edges just as you did with the left pair.

Another way to group items is to right-click on the selected items.

- ▶ From the menu that appears, click **Group Selection**.

Both pairs of openings are now locked together in their respective groups.



Grouping is important for several purposes as you create with FrameShop. Soon, there will be a presentation that will spotlight all the things that grouping can do in FrameShop.

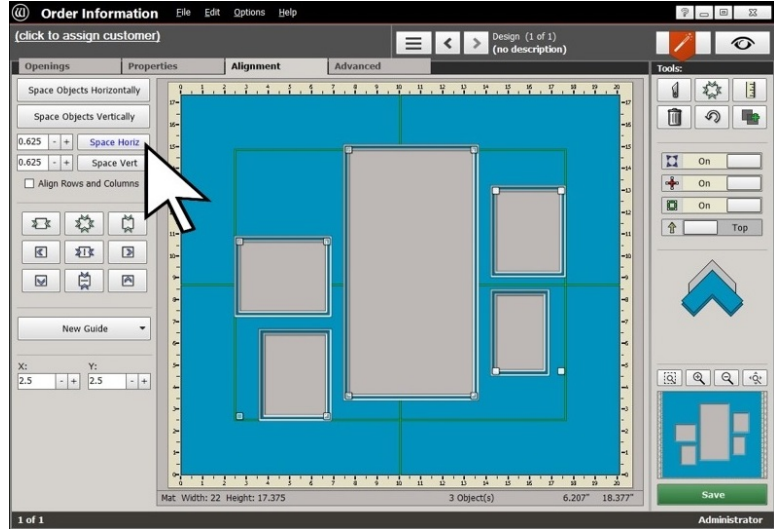


Aligning the Two Groups with the Large Opening

- ▶ Select both groups and the large center opening.
- ▶ Click the **Alignment** tab.

The following steps will repeat what we did in the previous project.

- ▶ Enter 0.625 inch in the field beside the **Space Horizontally** button.
- ▶ Click the **Space Horizontally** button.

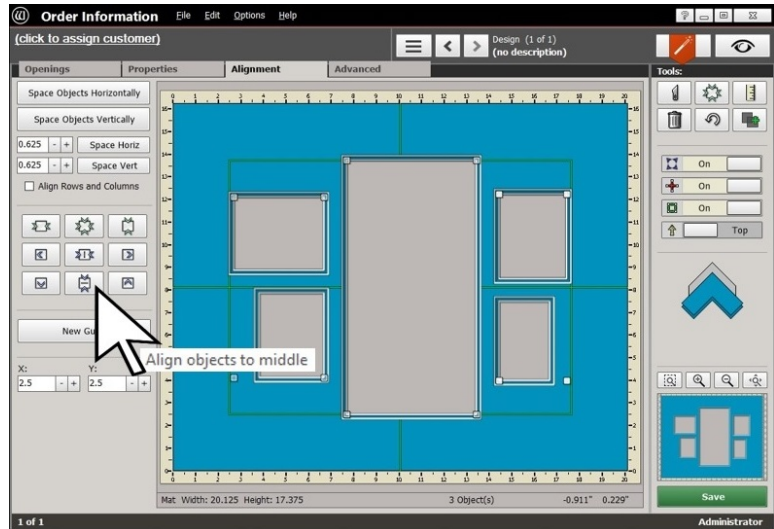


The openings will be spaced horizontally 0.625 inch apart, but they may not be in a tidy row.

- ▶ Click the middle button in the bottom row of Aligning buttons — the **Align Objects to Middle** button.

The openings' middles will now be lined up.

Dynamic Outsides has automatically set the outside size, and the project is ready to cut.



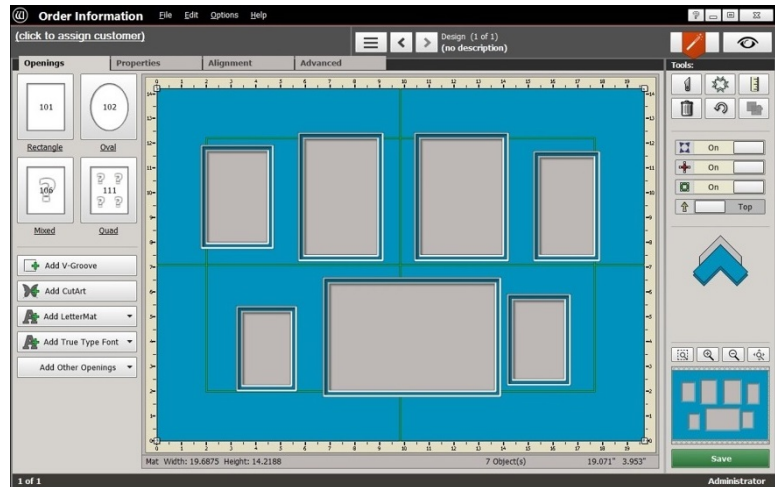


Project 5

A number of openings in a row is a common project. But multiple rows of openings are also common.

This project looks more complicated, but there will be nothing new here. Every process used here is something that we have seen in a previous project.

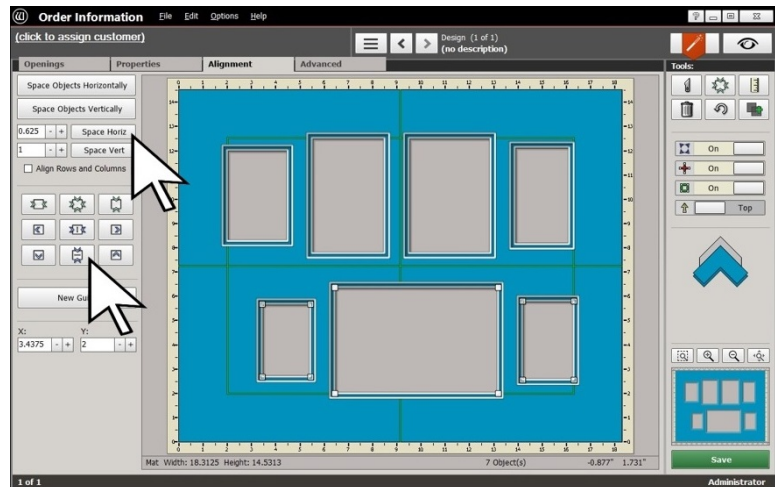
The point of this example is to illustrate that we now have an understanding of nearly all the tools we will need for a variety of multiple opening designs.



Here is a rough arrangement with 4 openings on the top row and 3 openings on the bottom row. No two of the openings are the same size, though the arrangement is made to create the illusion of symmetry.

Arranging and spacing each row is exactly like we've done in the previous projects using the **Aligning** buttons.

All the openings in each row are now 0.625 inch apart and their middles are lined up.





To make the project appear less as 2 rows and more like one group, the outside openings of both rows are moved toward the horizontal center using the arrow keys.

The openings in the top row were moved 2 clicks (0.125 inch) down.

The openings in the bottom row were moved 3 clicks (0.1875) up.

These decisions were purely artistic.

Once the openings in each row are spaced and arranged, the openings in each row are **Grouped**.

The 4 openings in the top row is one group.

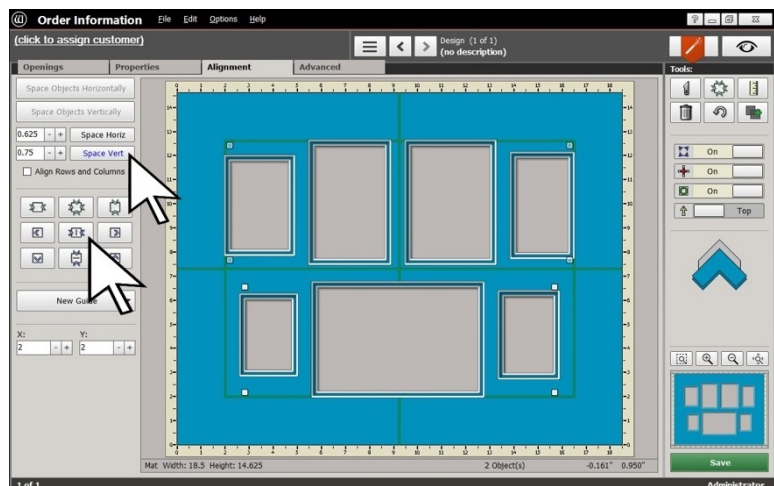
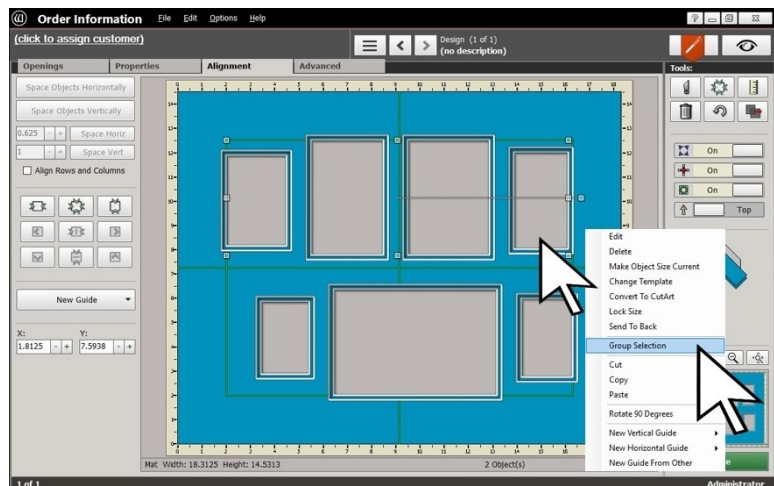
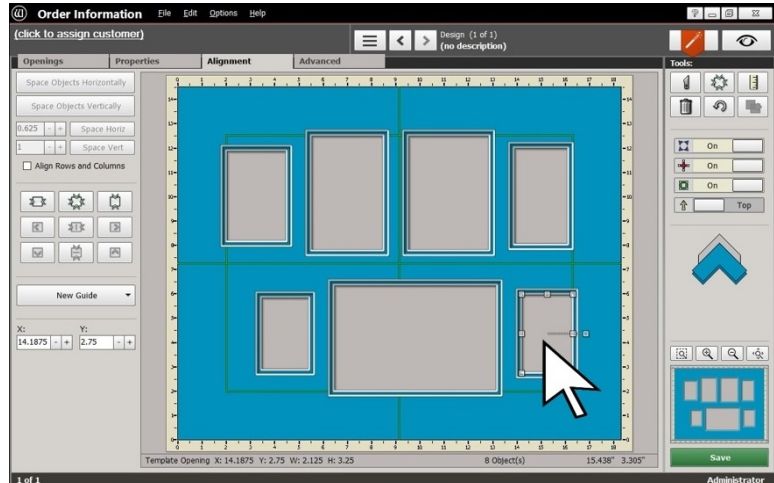
The 3 openings in the bottom row is a second group.

- ▶ Select both groups.
- ▶ Use the alignment buttons to space the groups and line up their middles.

You may want to make small adjustments to the spacing and centering using the arrow keys. Again, these decisions are artistic.

As with the other projects, **Dynamic Outsides** has calculated and set the outside size automatically.

The project is now ready to cut.





Things to Remember

Most arrangements for multiple opening designs can be reduced to rows and columns. The buttons for **Spacing** and **Aligning** give instant results to finish these arrangements.

- ★ Remember the settings for the **Positioning** button and **Dynamic Outsides**.
- ★ There was an introduction to **Grouping** as an aid to making a particular arrangement. There will be more on Grouping in future presentations.
- ★ Even though the aim of the alignment buttons is precision and orderliness, remember that the **Arrow** keys let you make more artistic, individualized adjustments to the layout.

