

## Creating Stripping Tools

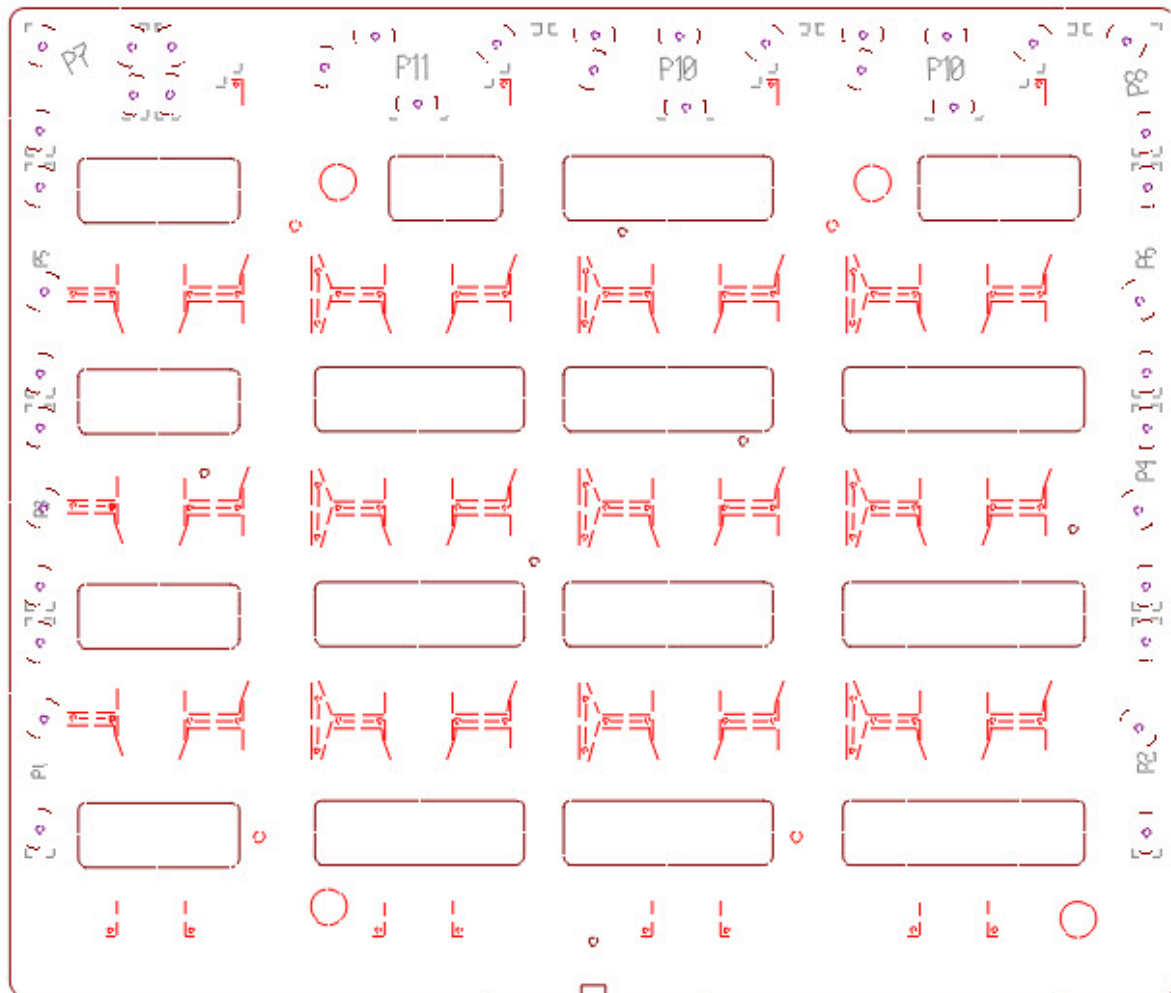
### Task

This exercise takes up from the result of Exercise “(08) Creating Cutting Die”. We will create the stripping tools for the cutting die we created earlier: male and female dies, front stripper. These are used to dislodge the waste from the cut sheet. While creating these tools we will place the following components: strip pins, male lifters, mounting bars, vacuum holes, transportation bolts. We will complete the project by creating bridge drawings.

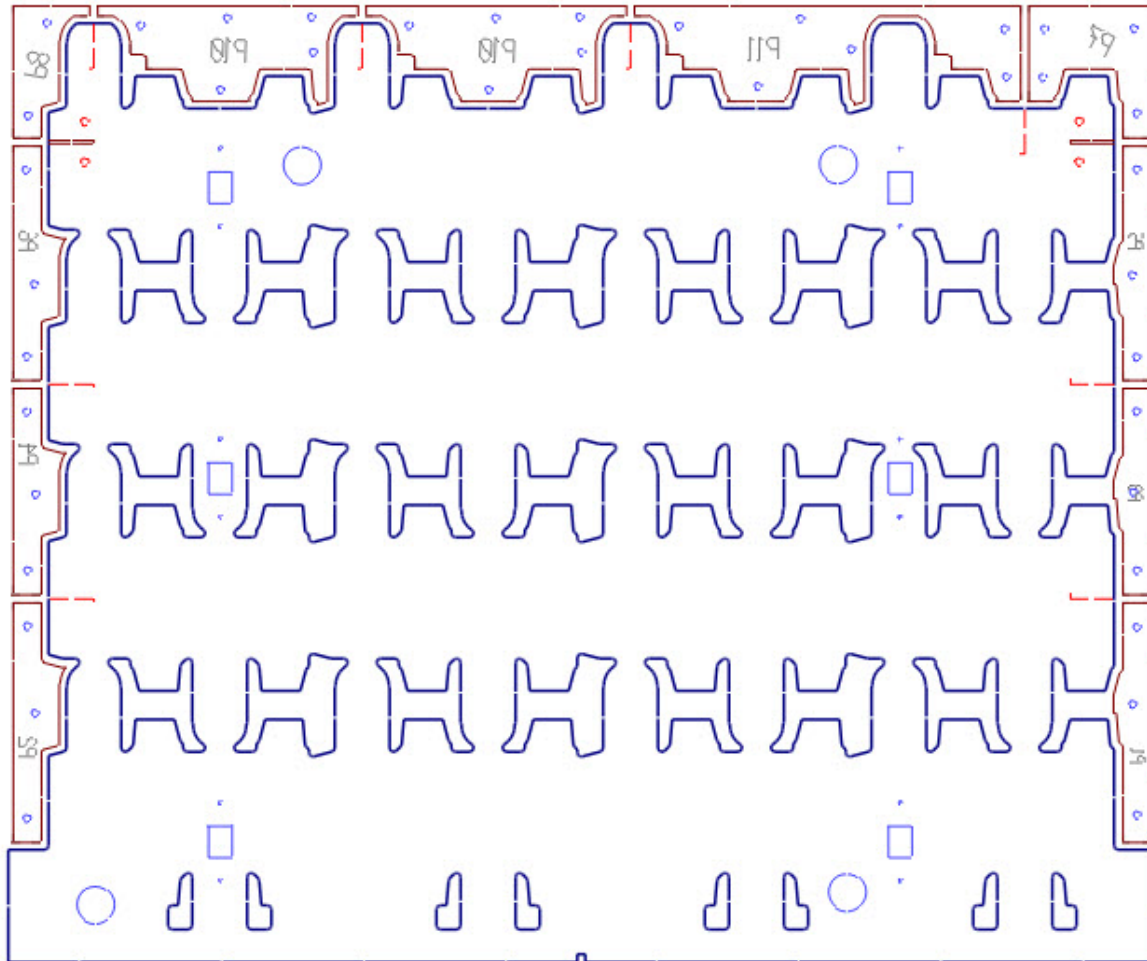
As an optional functionality we will show how several bridge drawing can be combined for batch cutting.

See the bridge drawings projects for the three stripping tools:

### Male stripping die



### Female stripping die



## Front stripper




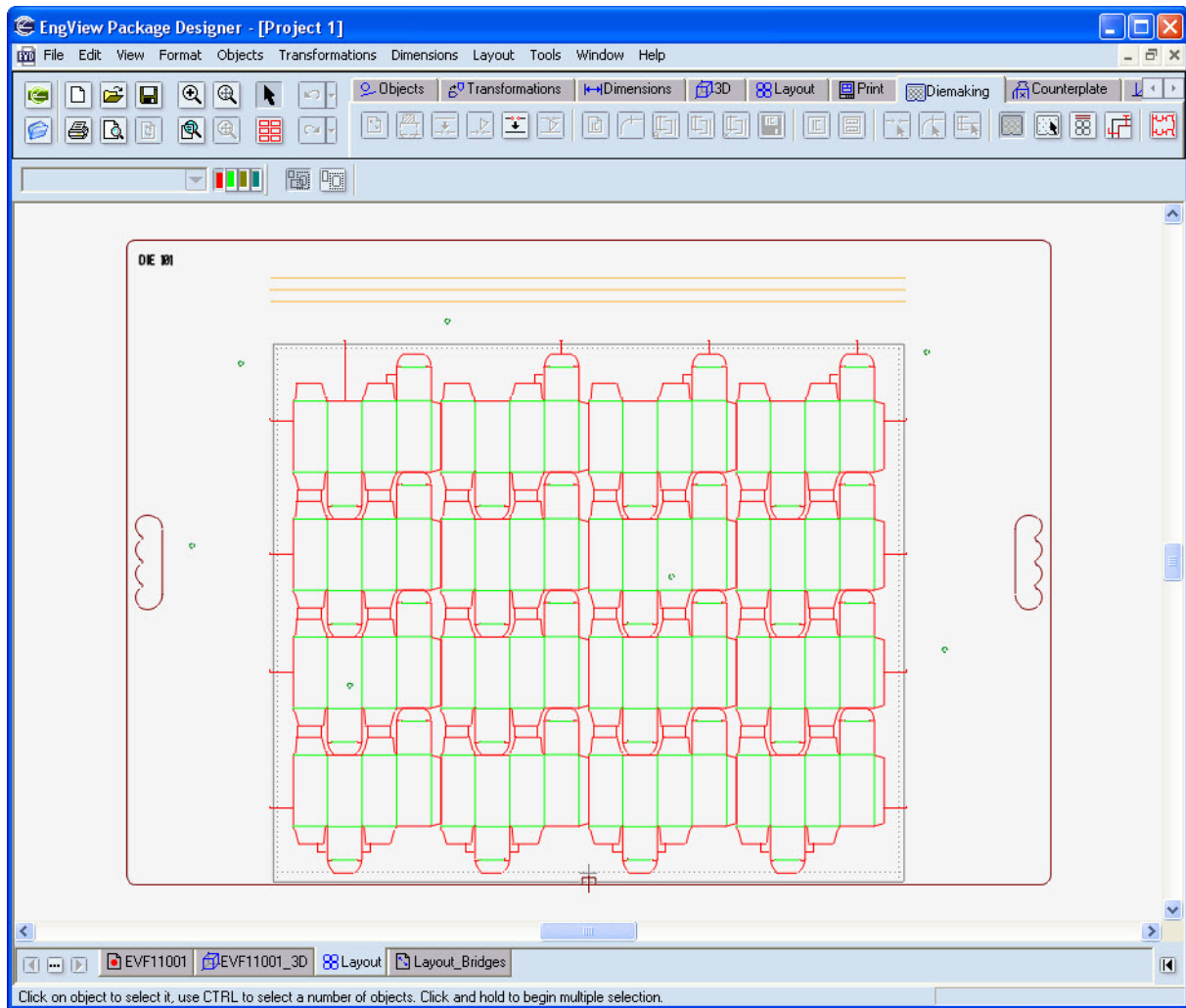
## Exercise description

### Setting contours

We start by setting the contours that will mark the useful area from the waste.

1. Go back to the layout drawing.

2. On the Diemaking toolbar, click **Create Die Contours** .



The **Stripping Contour Options** dialog box appears.

**Stripping Contour Options**

**Create Drawing Options**

☒ Create new

☐ Refresh

**Choose Cutting Knives**

☐ Already selected

☒ By filter

Type: (All)


Style: Cutting

Color: (All)

Pattern: (All)

☐ Length: From: 0,00 To: 3,00  
☐ Depth range: -1,00 1,00  
☐ Line width (pt): 0,10 5,00  
☐ Include hidden objects

**Material Visualization Style**

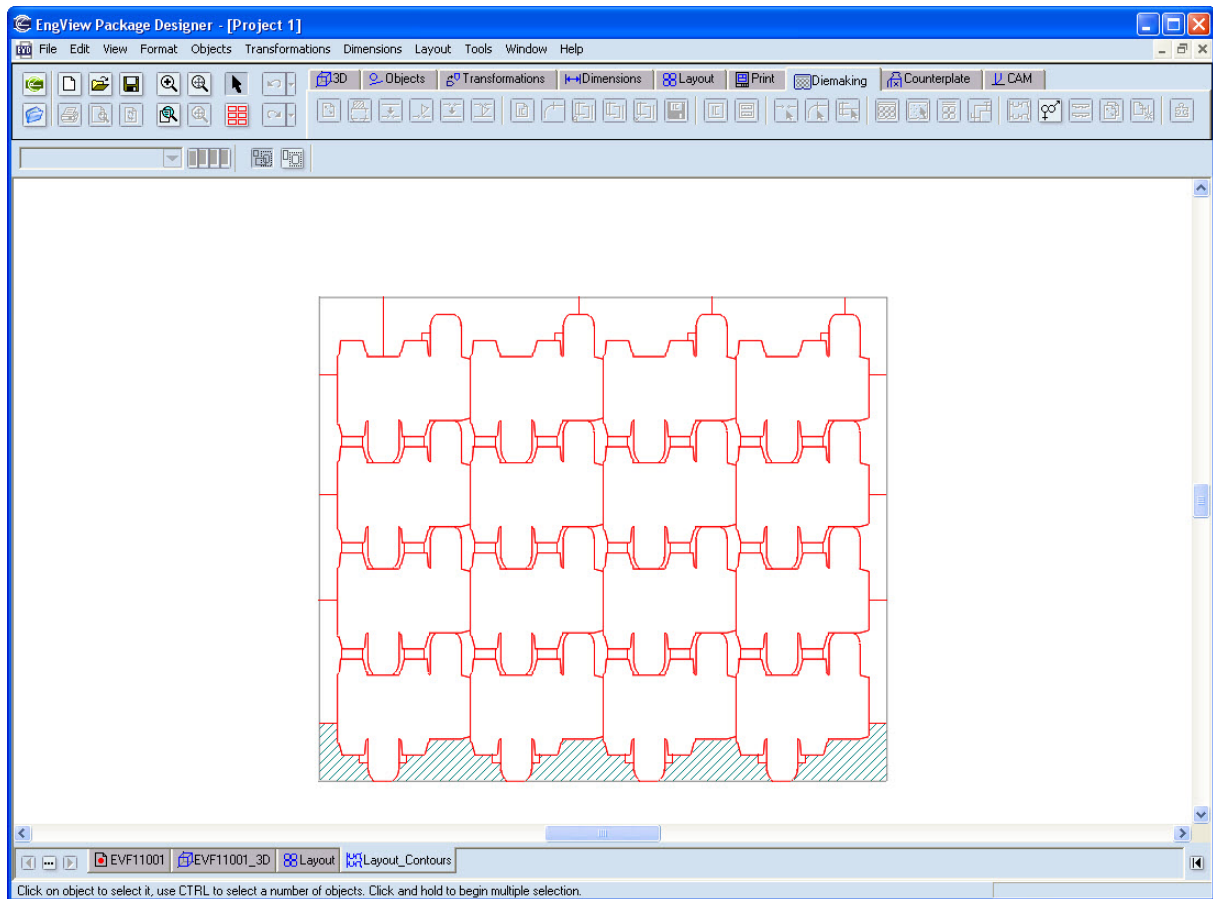
Edit 


OK Cancel Help

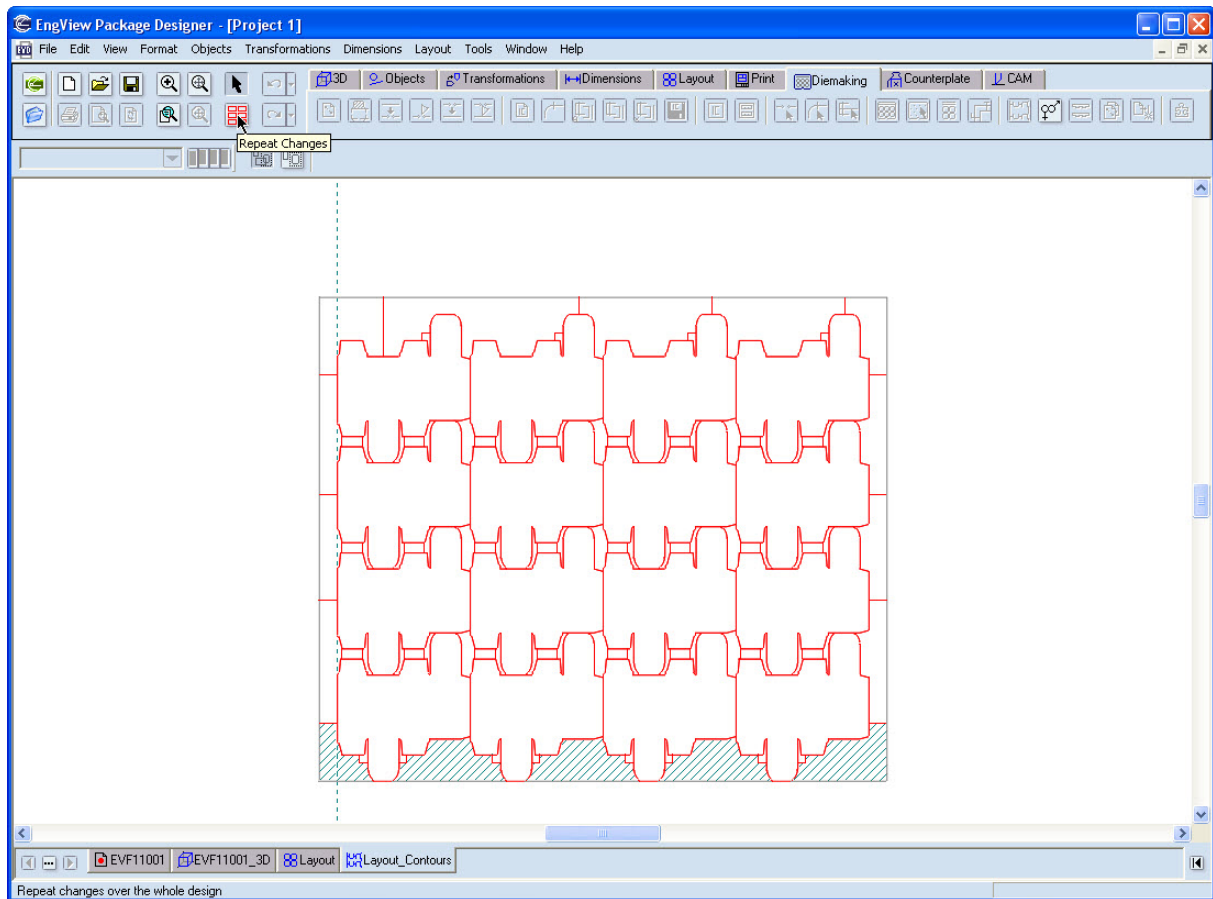
2. Accept the defaults and click **OK**.

The first contour is created automatically, applied to the lower front stripper.

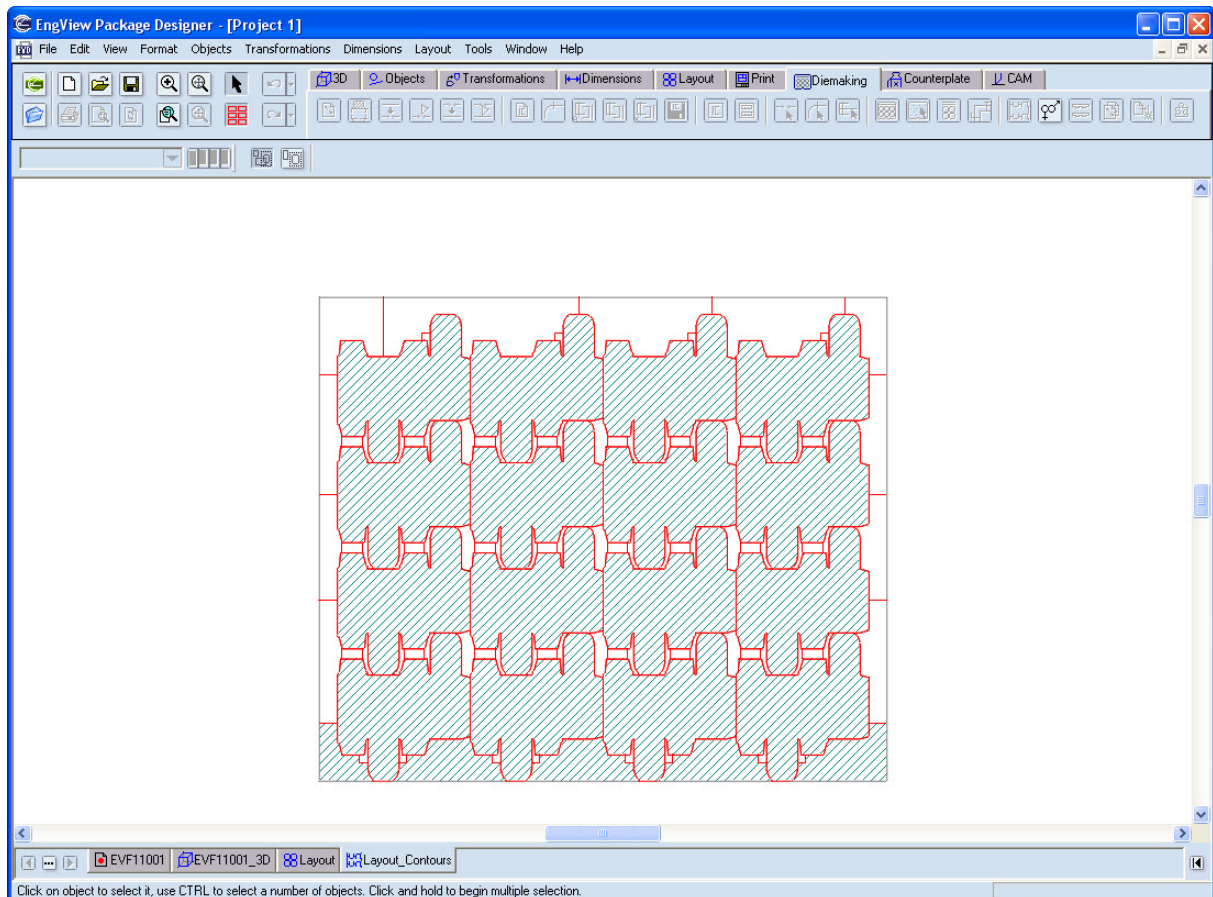




3. Now we shall proceed with the creation of contours for the rest of the 1ups. To make the contour creation easy and uniform, ensure that the **Repeat Changes** button —  — is pressed in.



4. Now click any of the 1ups. The contours are created automatically in all identical 1ups.

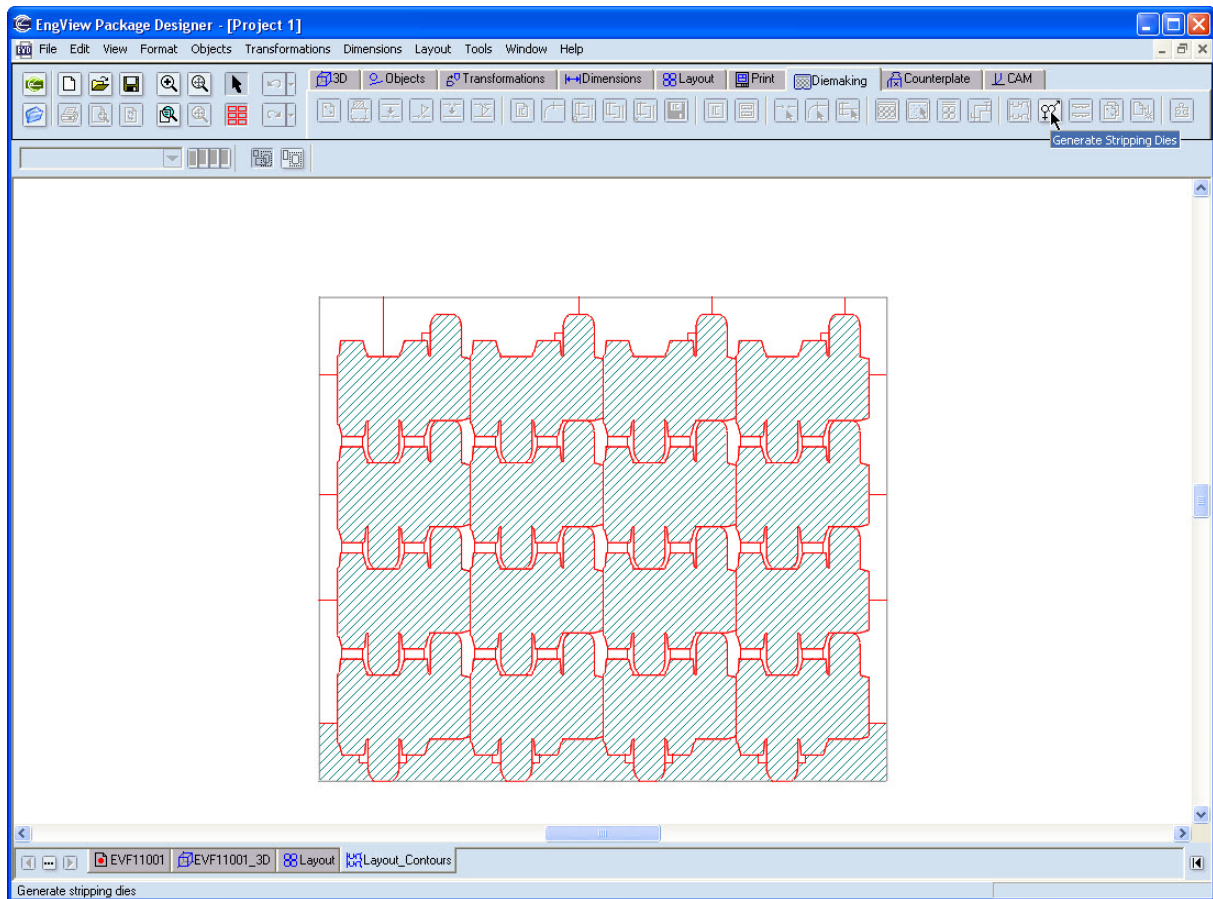


*The contours are set.*

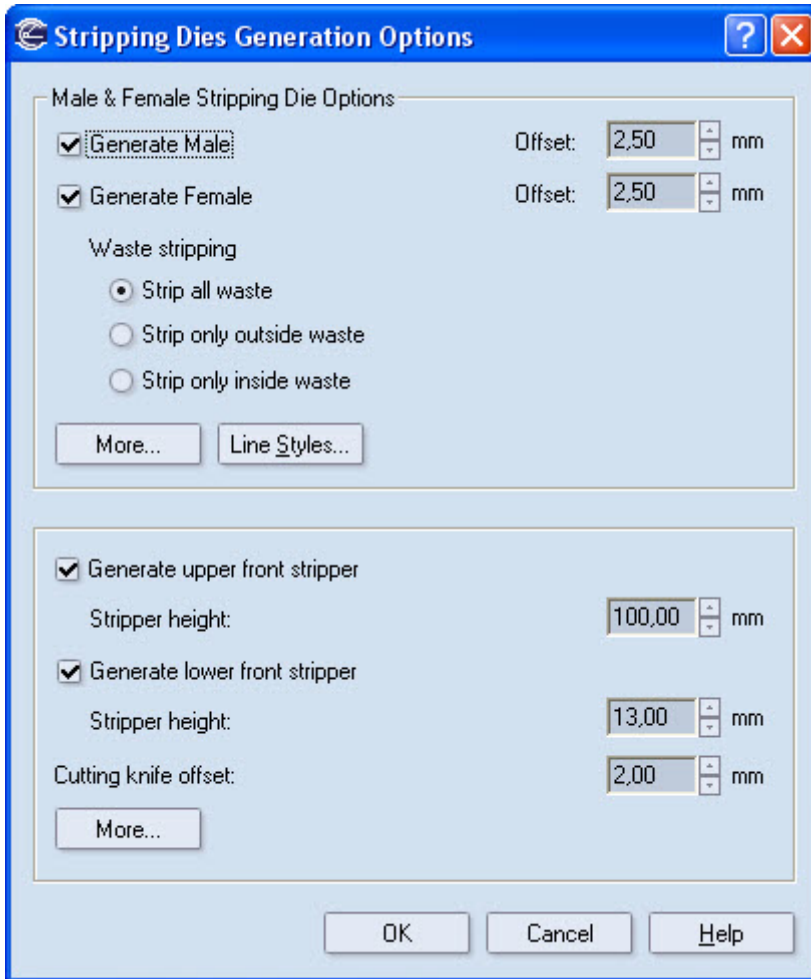
### Generation of the stripping dies

Now we shall create the male and female stripping dies, as well as the front stripper. These will be visualized in separate drawings.

1. On the Diemaking toolbar, click the **Generate Stripping Dies** button .



The **Stripping Dies Generation Options** dialog box appears.



**Stripping Dies Generation Options**

Male & Female Stripping Die Options

☒ Generate Male      Offset: 2,50 mm

☒ Generate Female      Offset: 2,50 mm

Waste stripping

☒ Strip all waste

☐ Strip only outside waste

☐ Strip only inside waste

More...    Line Styles...

---

☒ Generate upper front stripper

Stripper height: 100,00 mm

☒ Generate lower front stripper

Stripper height: 13,00 mm

Cutting knife offset: 2,00 mm

More...

OK    Cancel    Help

2. In the *Male & Female Stripping Die Options* area, click **More**.

The **More Male & Female Generation Options** dialog box appears.

**More Male & Female Generation Options**

**Male Die Options**

☐ Override male holes offset      Offset: 2,50 mm

☐ Override stripping knives offset      Offset: 2,50 mm

☐ Override horizontal sheet offset      Offset: 2,50 mm

☐ Override vertical sheet offset      Offset: 2,50 mm

☒ Label pieces      Label size: 14,00 mm

☒ Put male edge markers      Length: 5,00 mm

☒ Detect and replace simple hole shapes (lines & strip pins)      Settings...

Male dieboard: BOBST Auto Margins      Edit...

**Female Die Options**

Handle offset from sheet: 0,00 mm

☐ Use bottom handle margin: 0,00 mm

☒ Stripping knives extensions

☒ All

Knife shape: SK Extension Line.evb      Settings

☒ Override Top: SK Extension 1.evb      Settings

☐ Top only

Knife shape: SK Extension 1.evb      Settings

☒ Put female center line

Width: 5,00 mm      Height: 5,00 mm

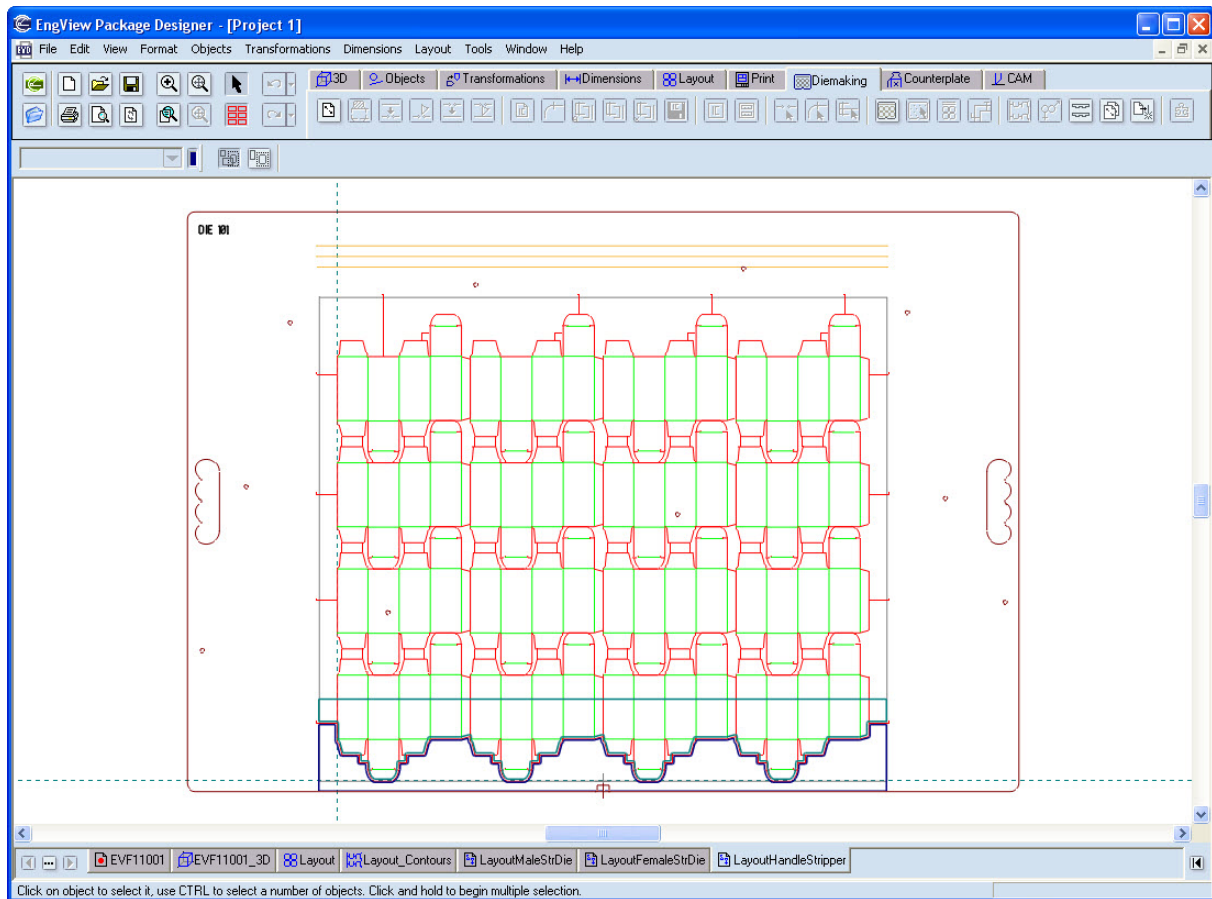
Female dieboard: BOBST Auto Margins      Edit...

OK      Cancel      Help

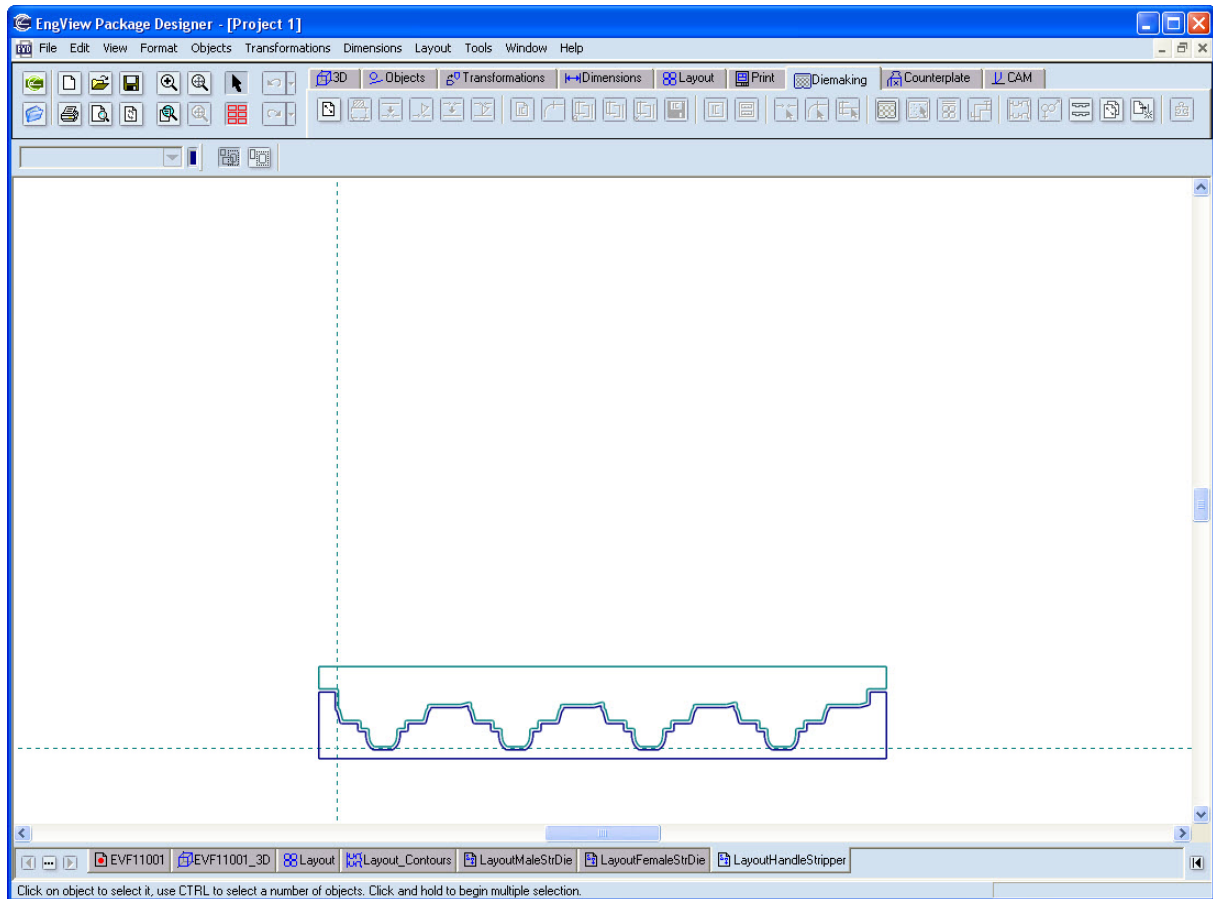
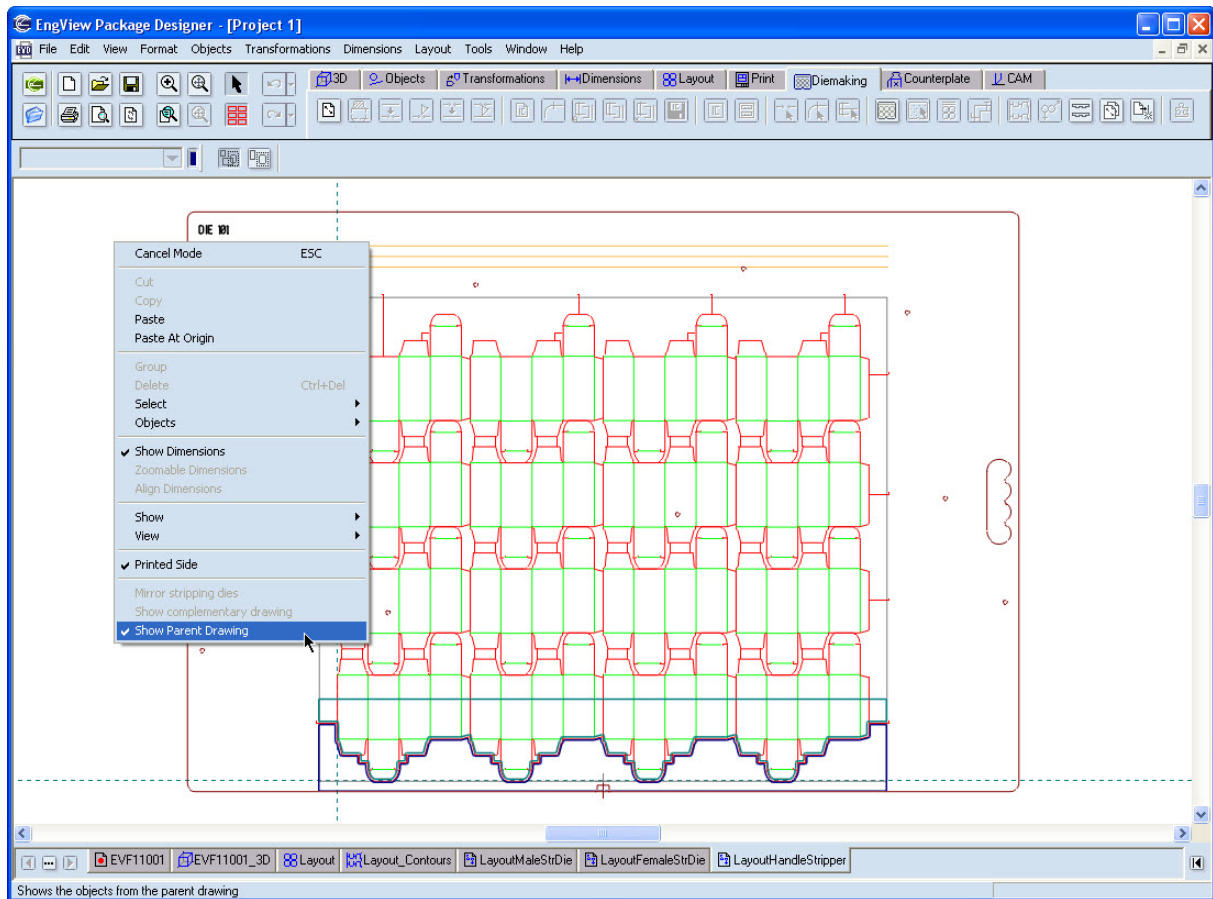
3. Click **OK**.

Three new drawings are added to the project – for the male and the female stripping dies, and for the front stripper.

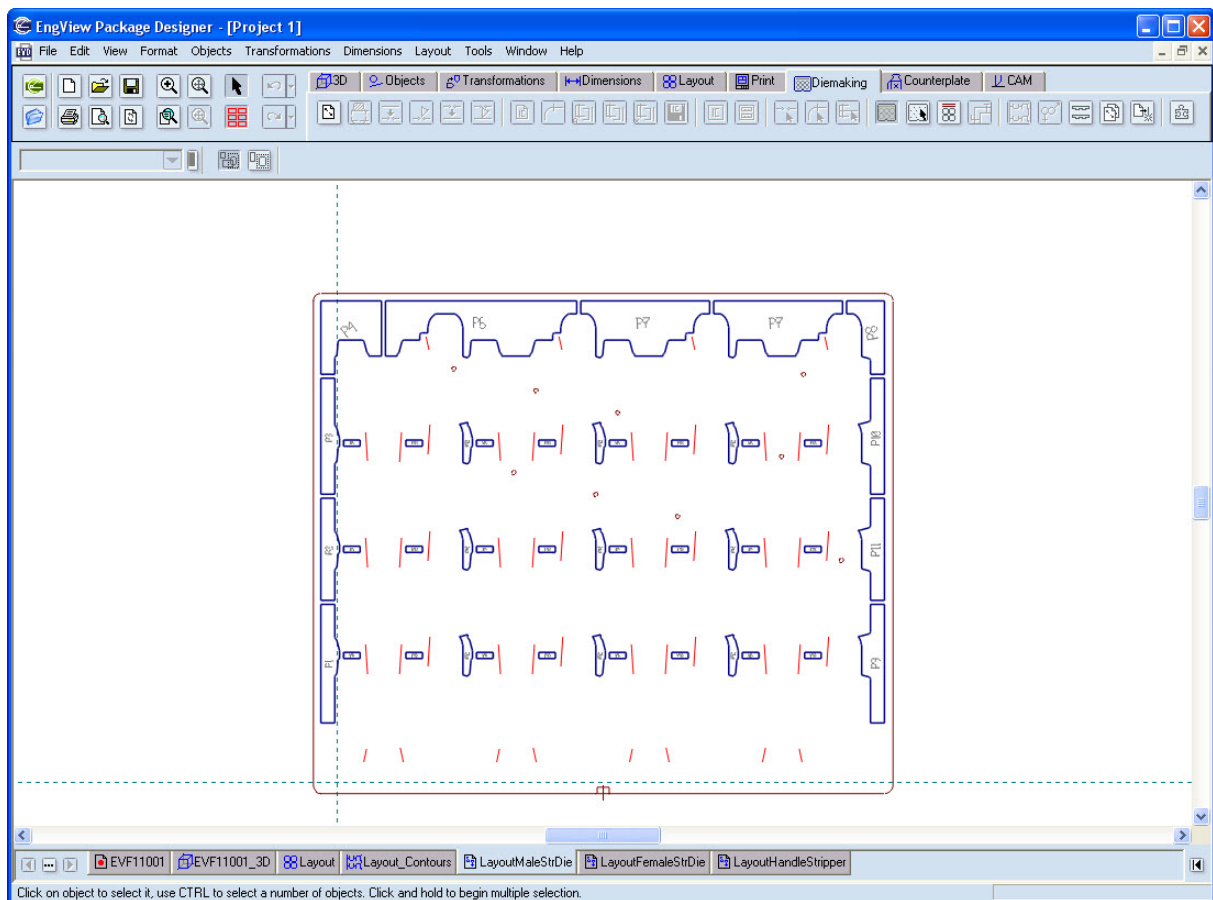




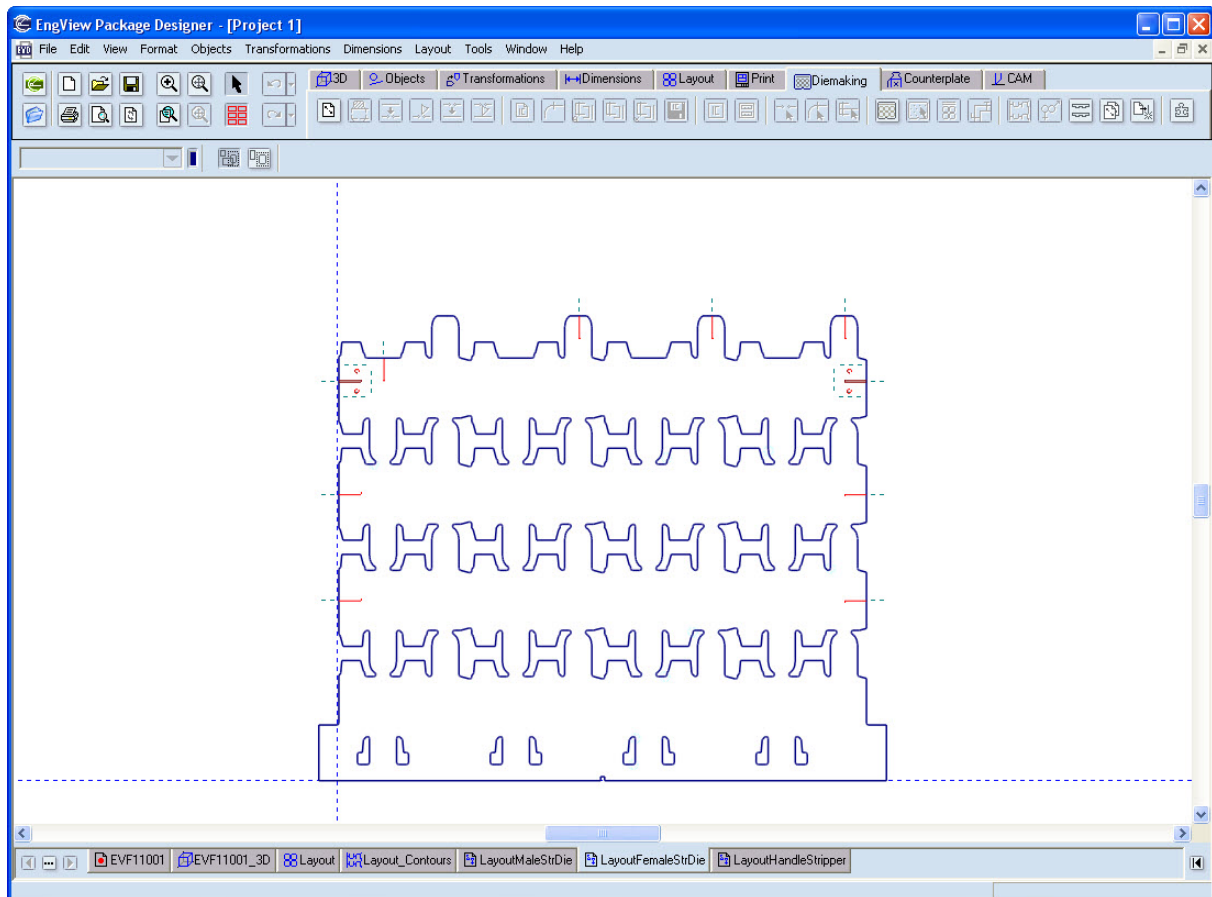
4. To get a clearer view of the stripping die, hide the parent drawing: in the graphical area, right-click, and then click **Show Parent Drawing**.



### *The front stripper*

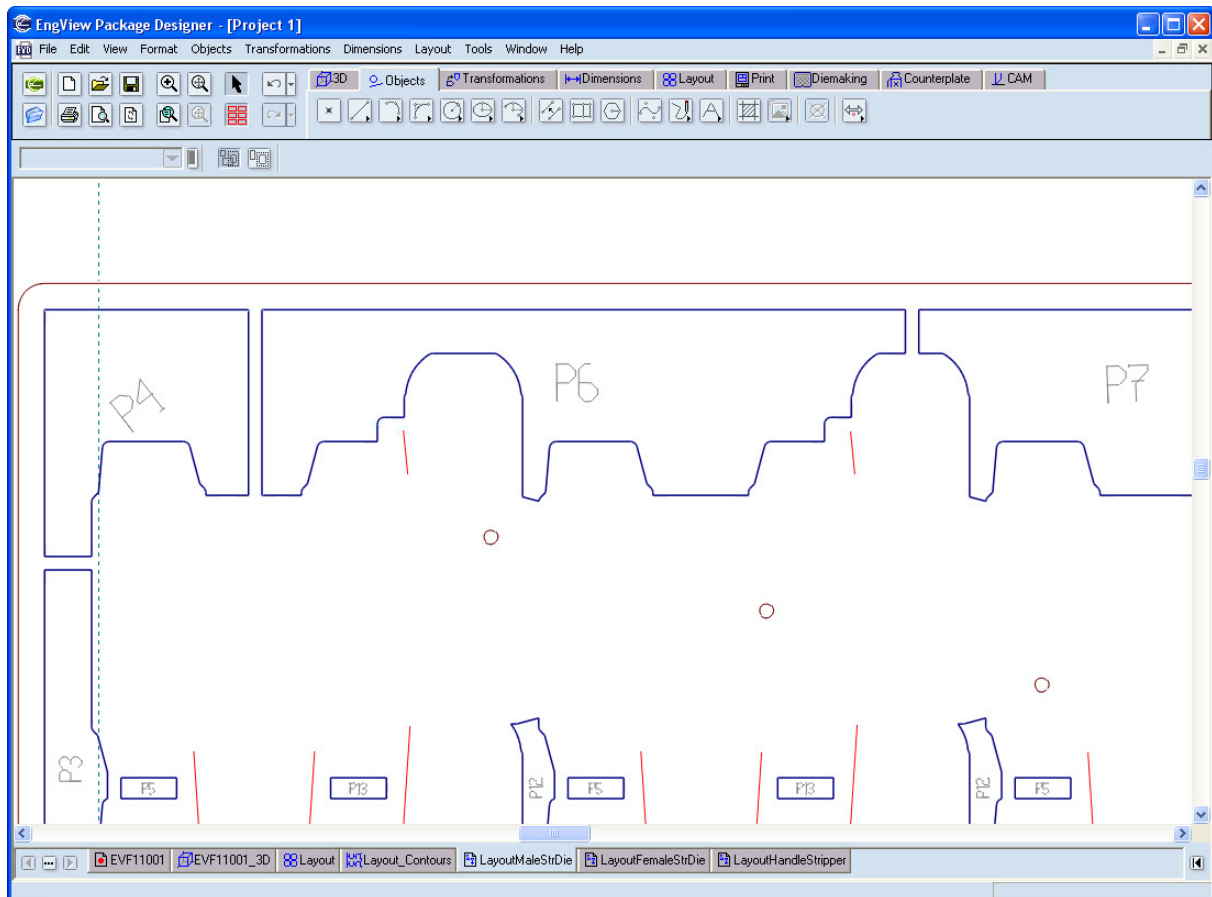


### *The male stripping die with the parent drawing hidden*

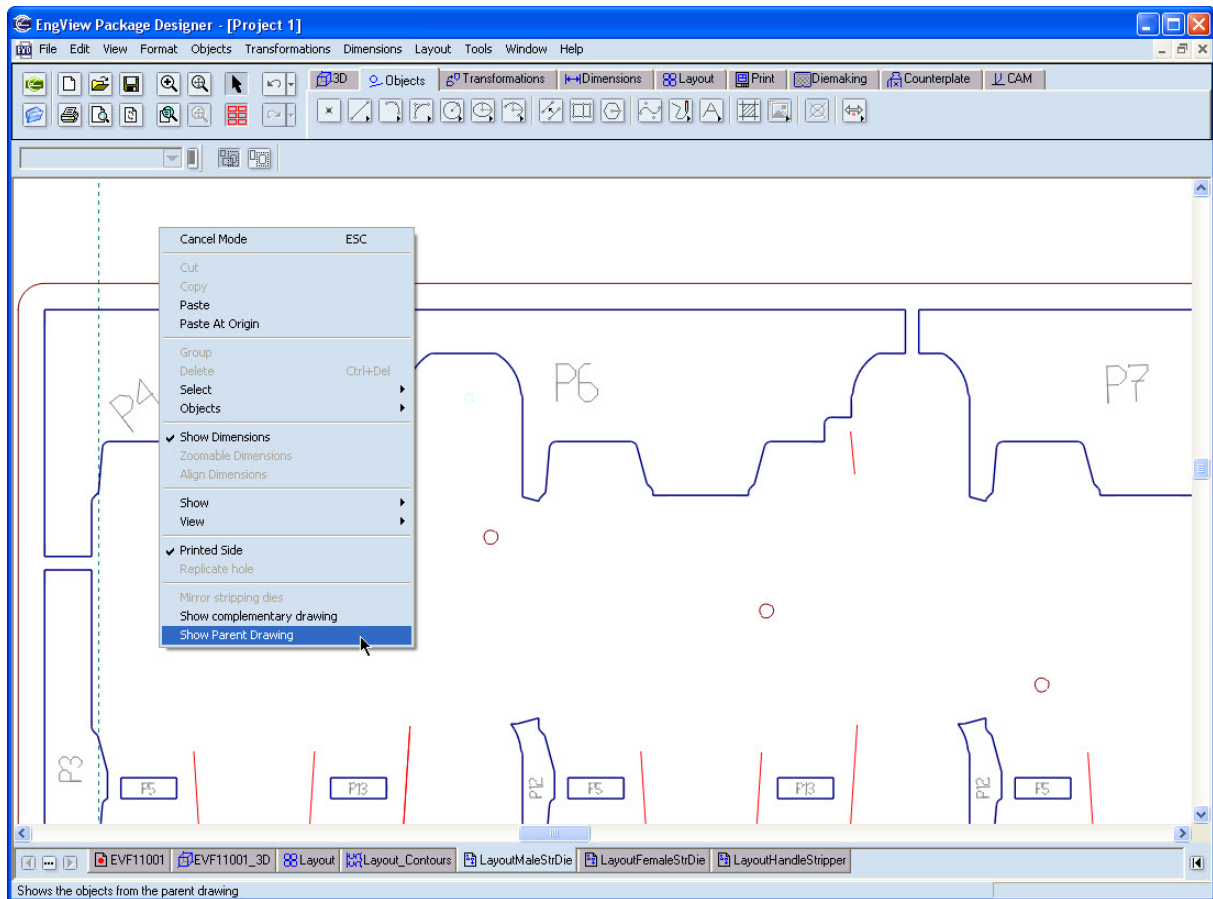


*The female stripping die with the parent drawing hidden*

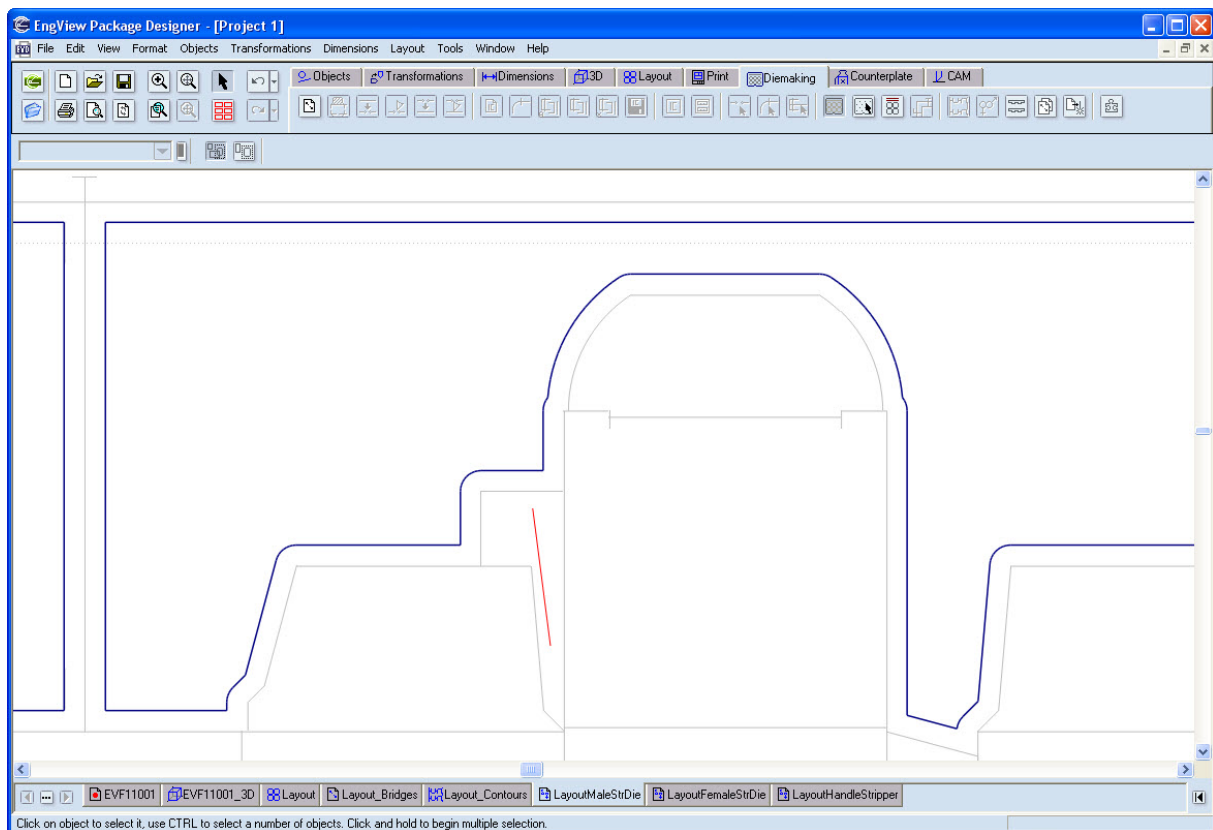
In the male stripping die, some of the stripping wooden pieces have been substituted by stripping knives, which we will now edit out. This must be done to ensure better stripping of the waste. This editing will result in more effective strippers.



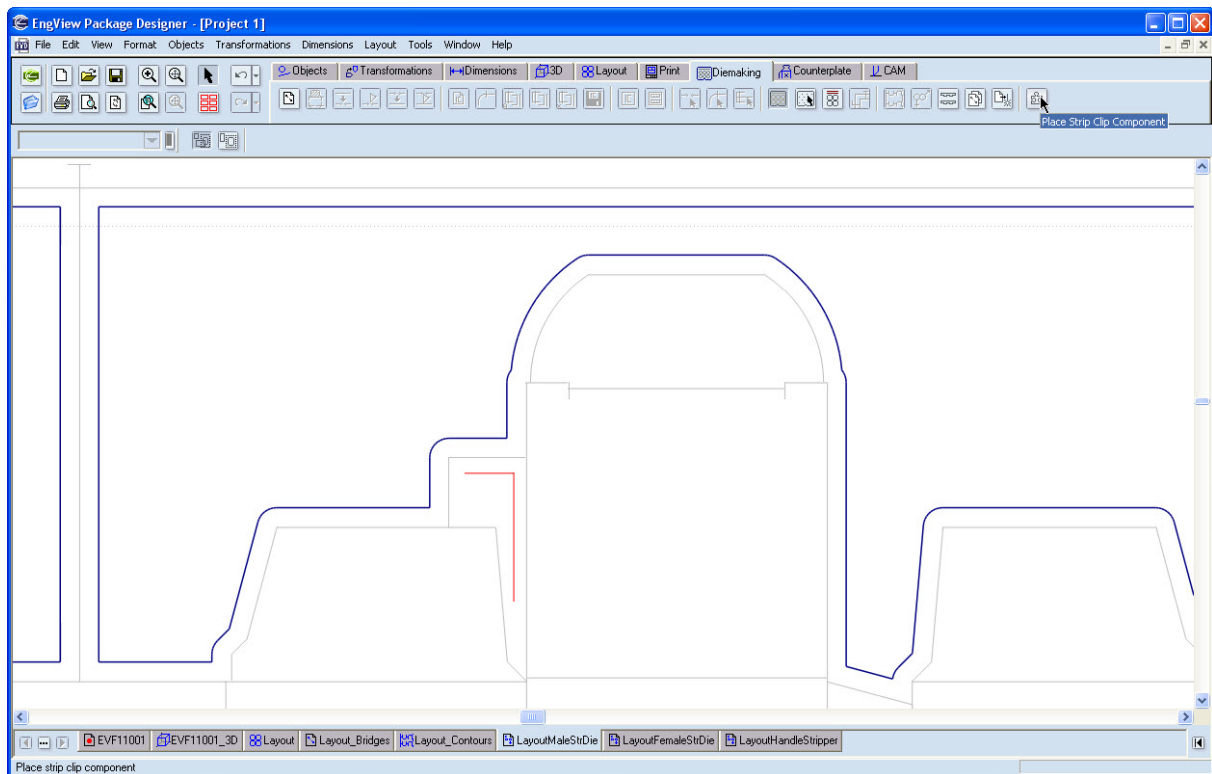
To be able to draw, we show the parent drawing. It is necessary to take the parent drawing into account. That's why we visualize the parent drawing.



*Visualization of the parent drawing*








## Placing strip pins

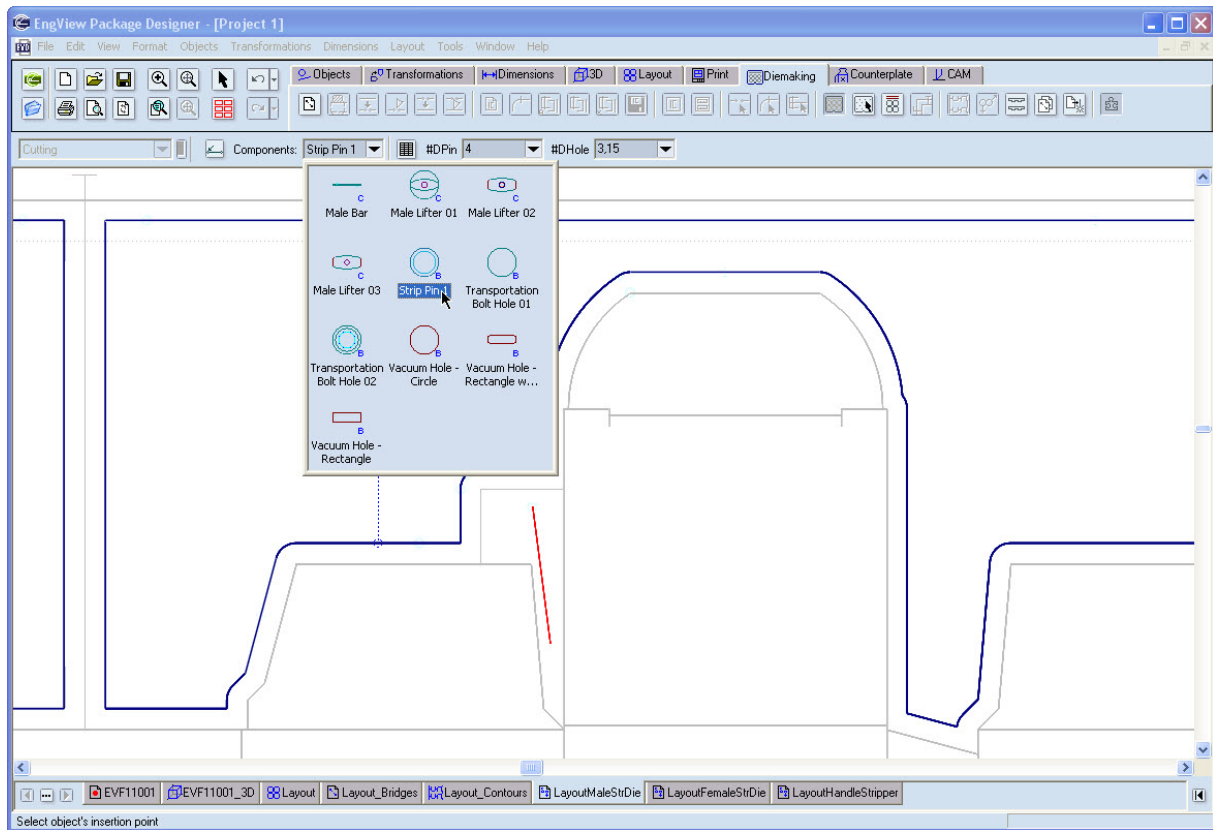
1. On the Diemaking toolbar, click **Stripping Die Components** .

A contextual edit bar appears above the graphical area.

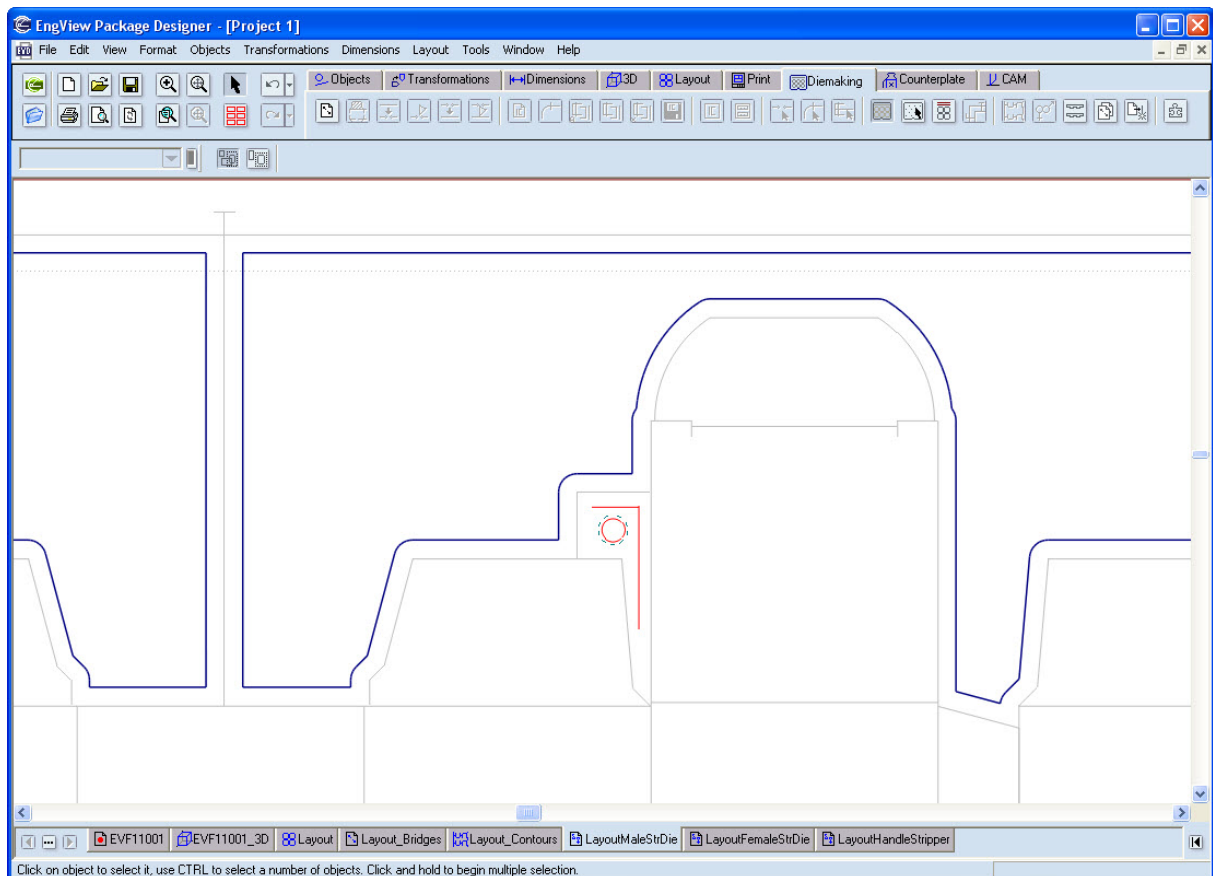
2. In the contextual edit bar, in **Components**, click the down arrow, and click Strip Pin 1.

NOTE: To ensure identical positioning across the dieboard, ensure that the **Repeat Changes** button

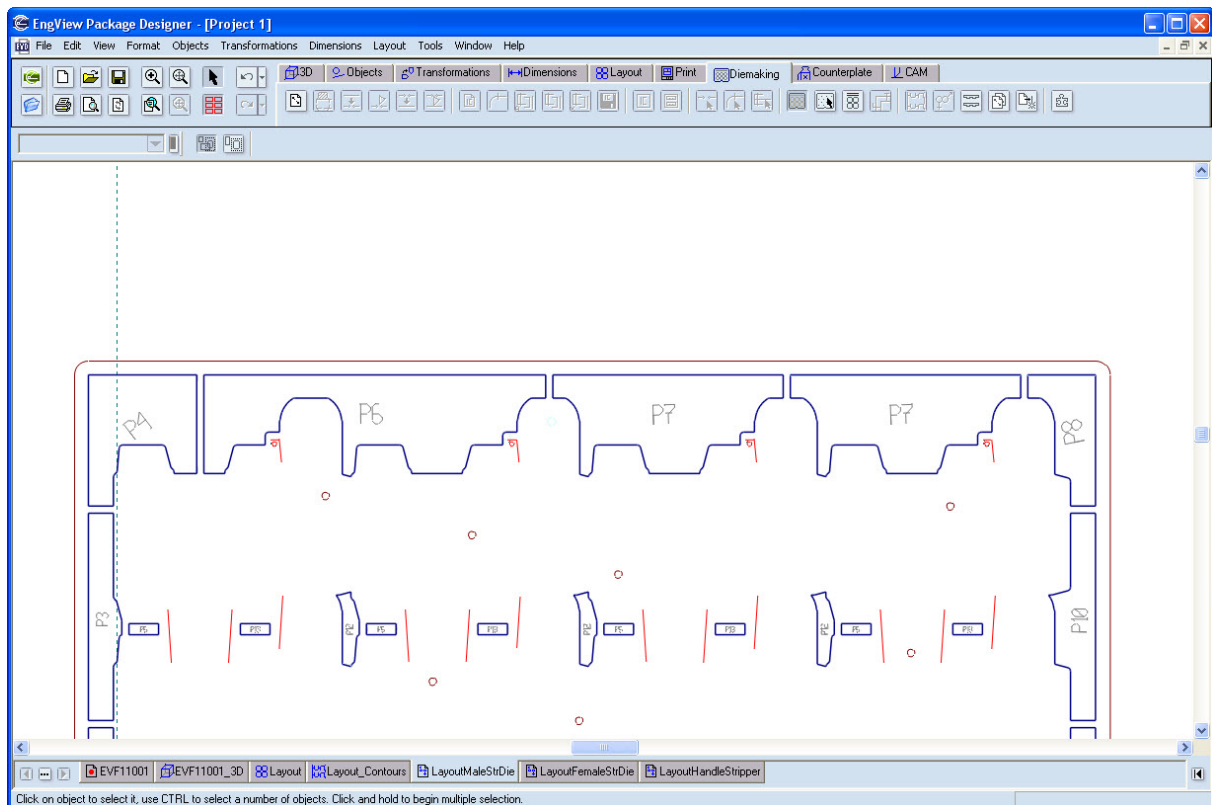
—  — is pressed in.



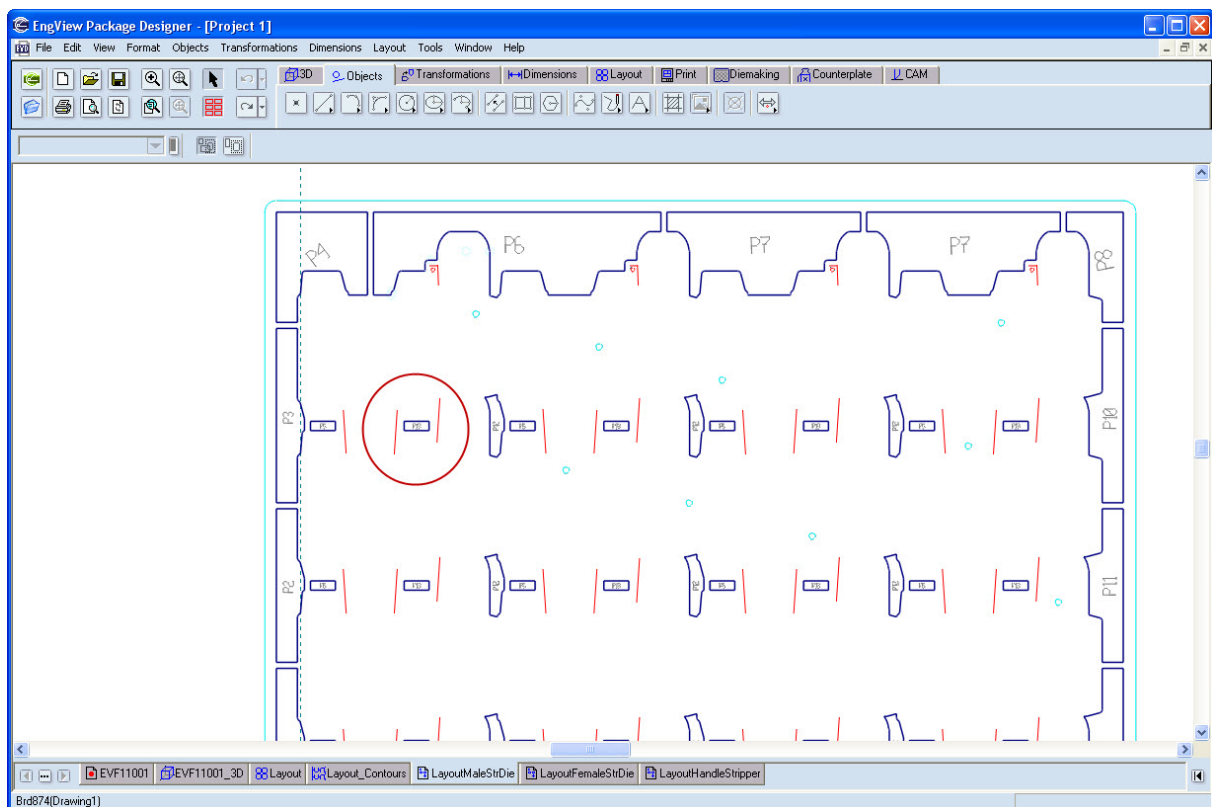
*Here the component is placed and an additional stripping line is drawn.*



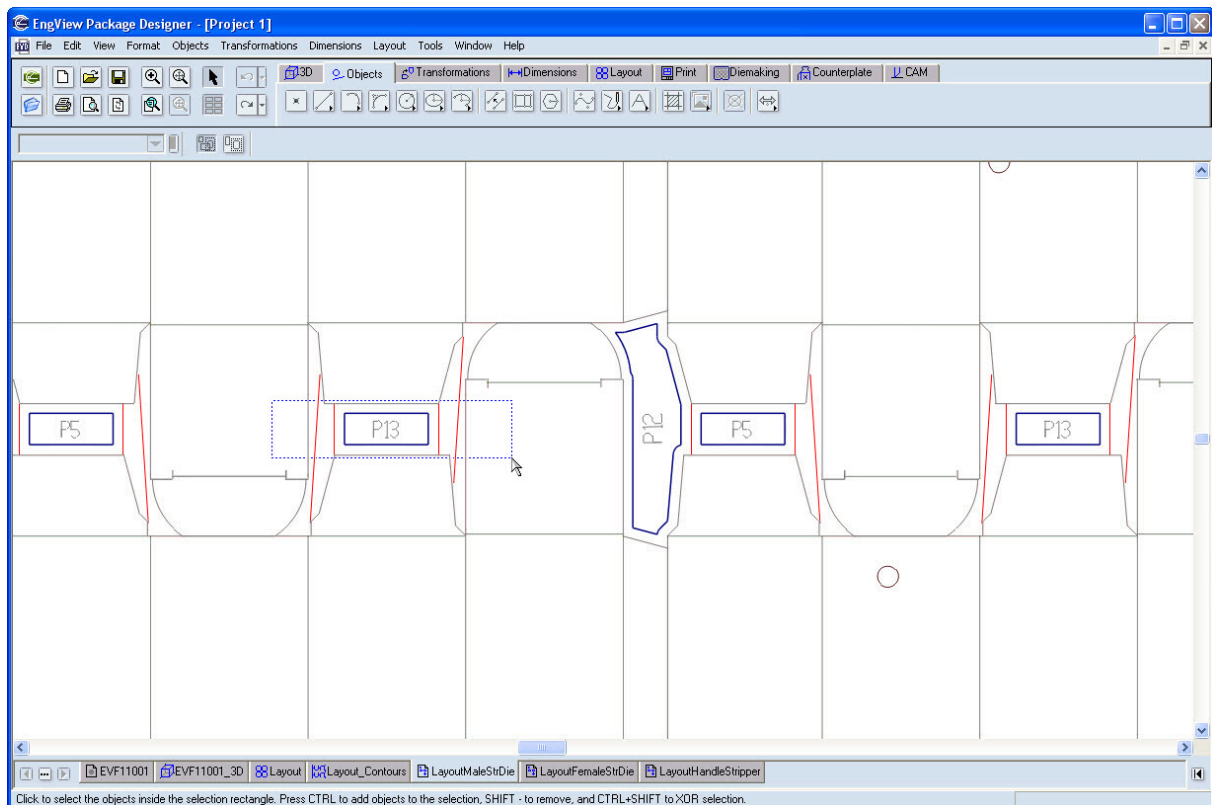
*A strip pin is inserted.*



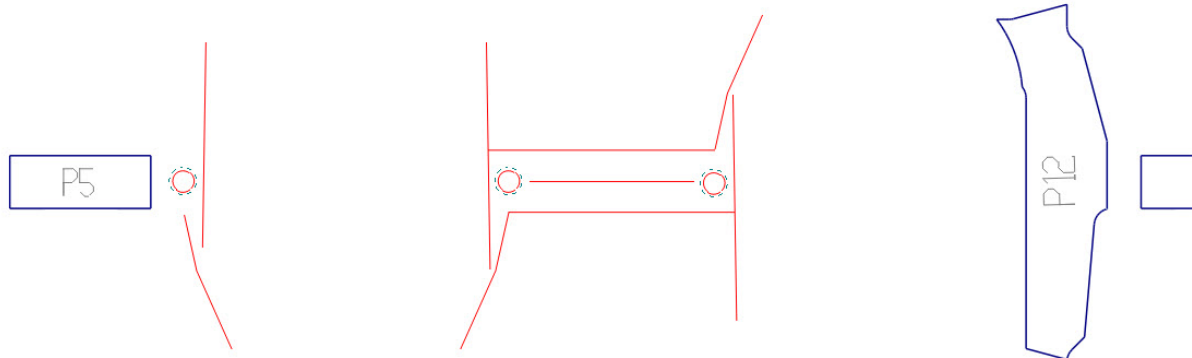
3. Continue with the editing of the rest of the zones with stripping elements.



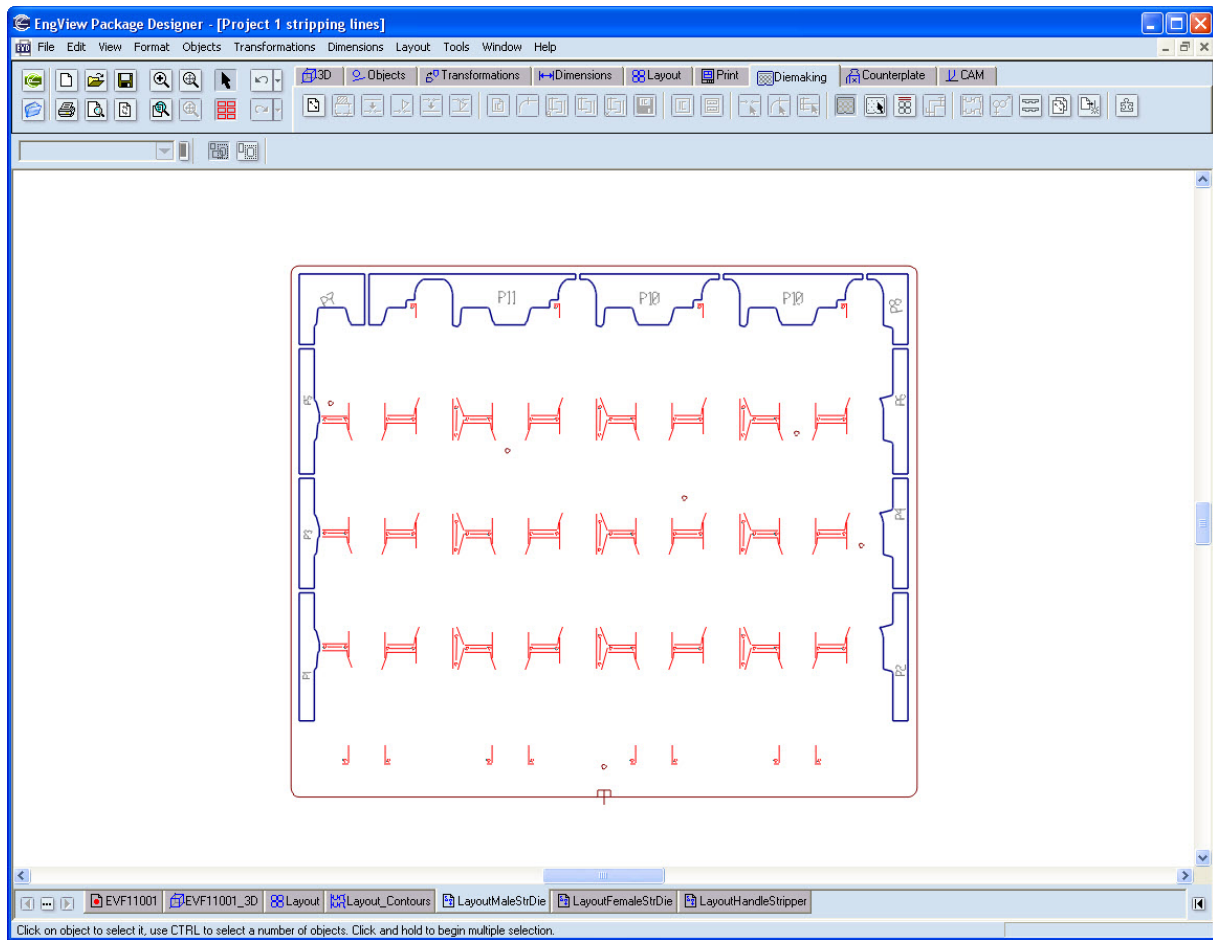
In the positioning of the stripping lines, the parent drawing must be taken into account.



*The result. The lines of the P13 element have been erased, because the element is replaced with stripping knives.*



4. Continue with the editing of the next zone.



*Final view of the stripping instruments on the male stripping die.*

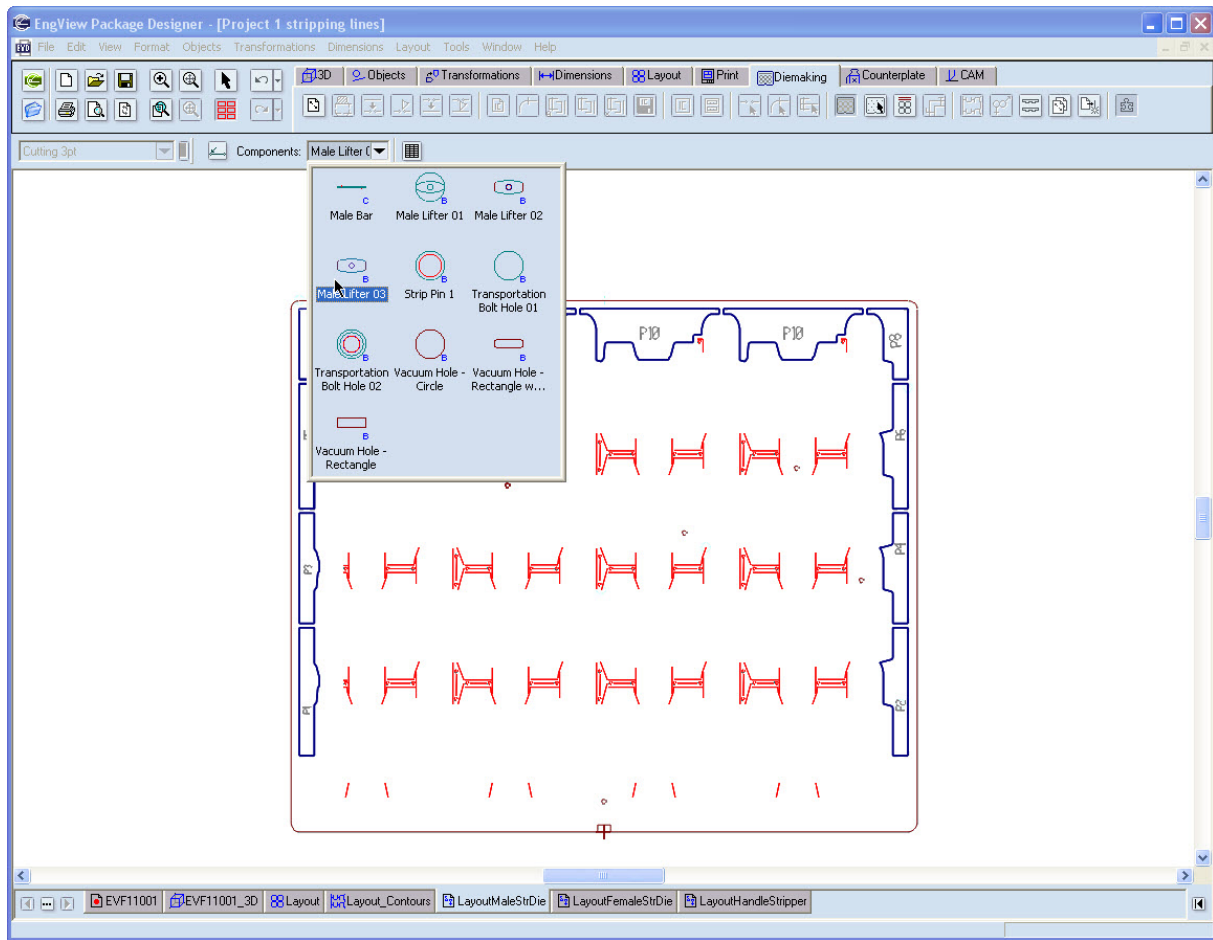
## Placing male lifters

Next comes the placement of lifters on the male stripping die.

1. On the Diemaking toolbar, click **Stripping Die Components** .

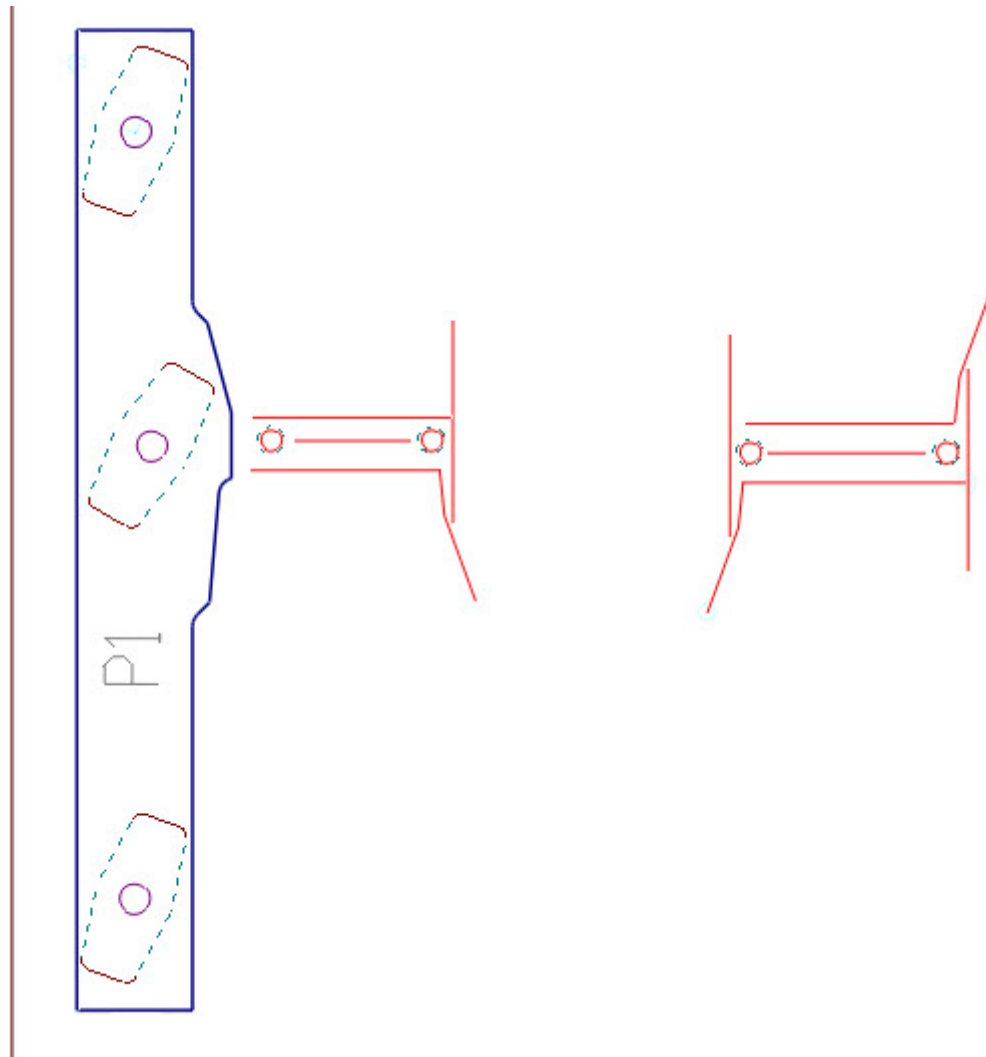
A contextual edit bar appears above the graphical area.

2. In the contextual edit bar, in **Components**, click the down arrow, and click Male Lifter 03.

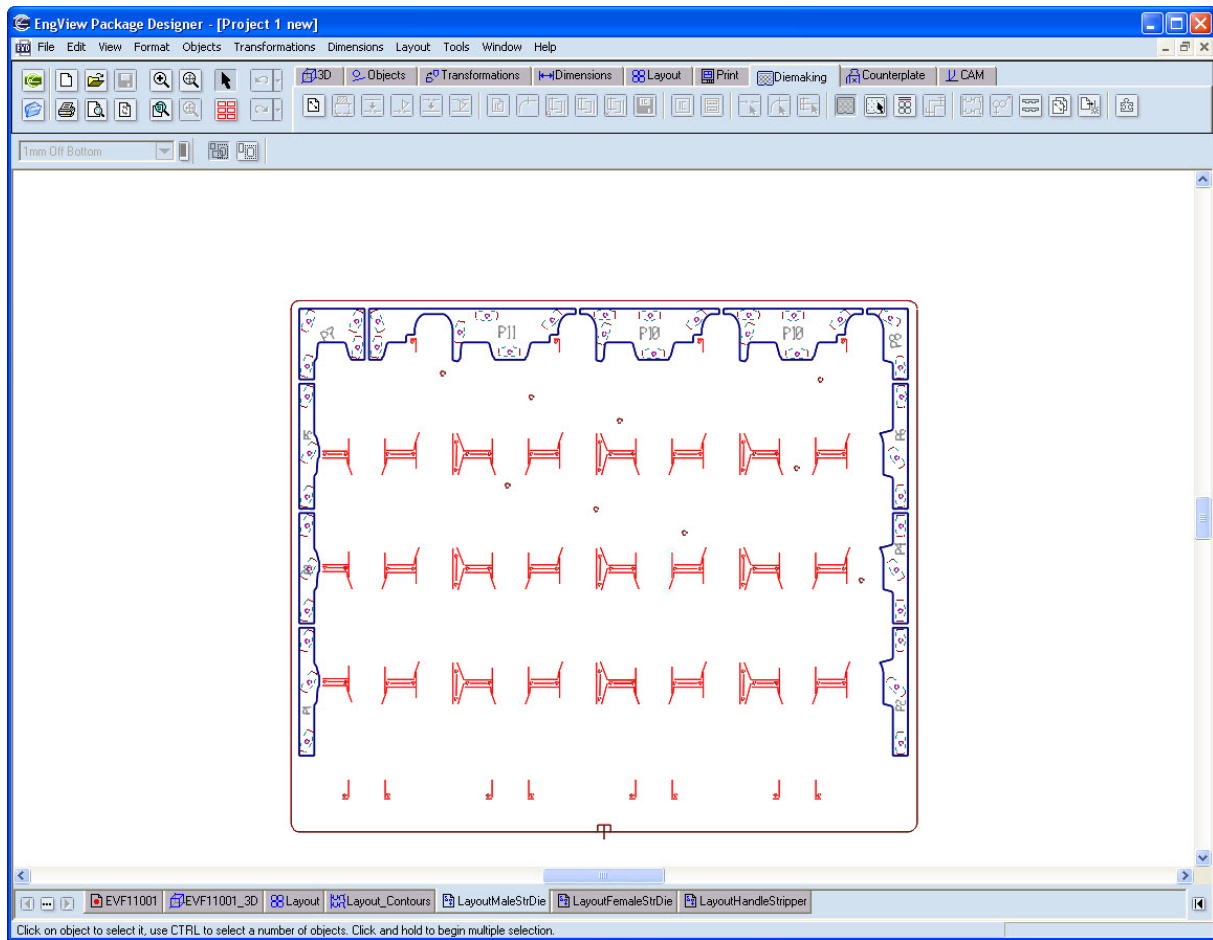


*Placing of lifters into the lower left part (P1).*





*The lifters in P1: the final state*

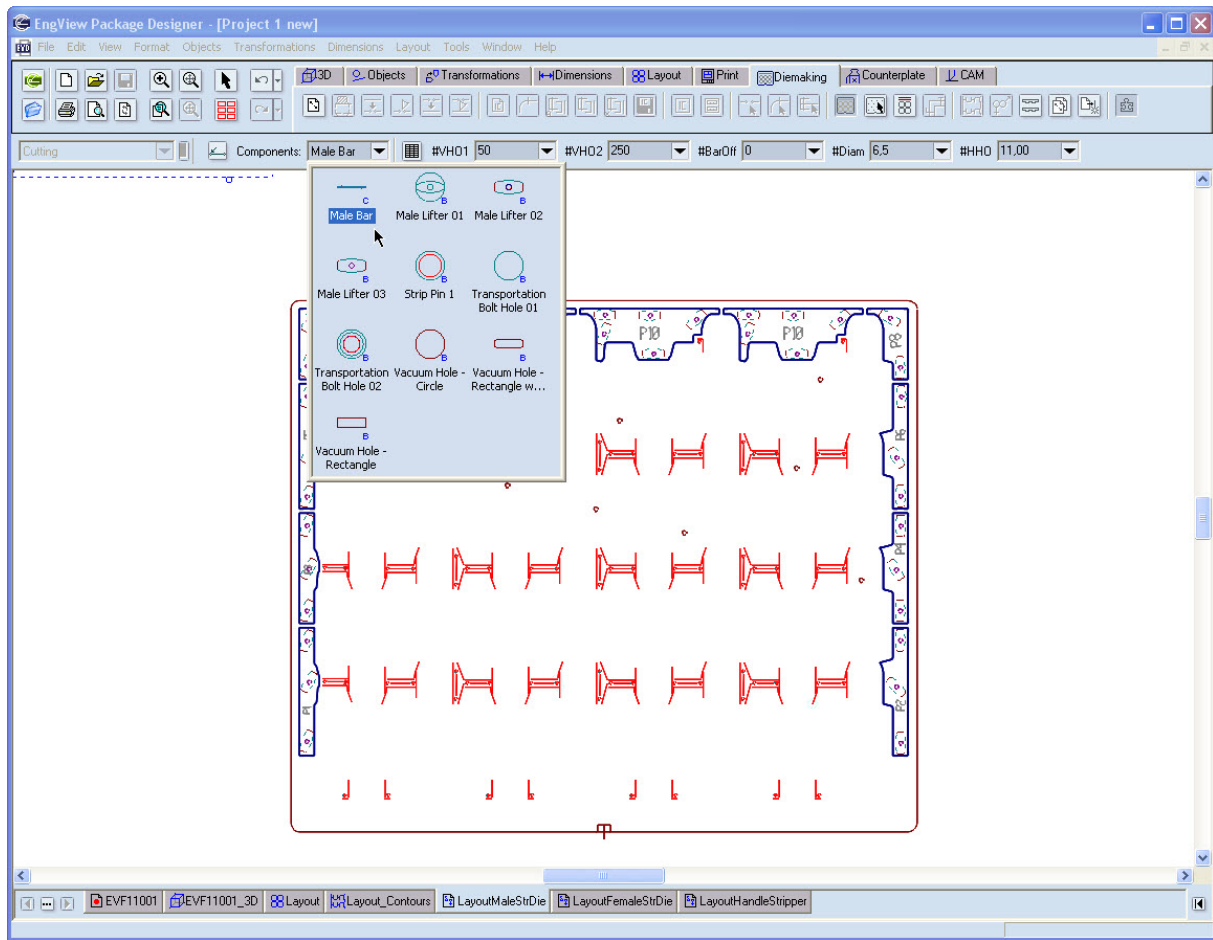


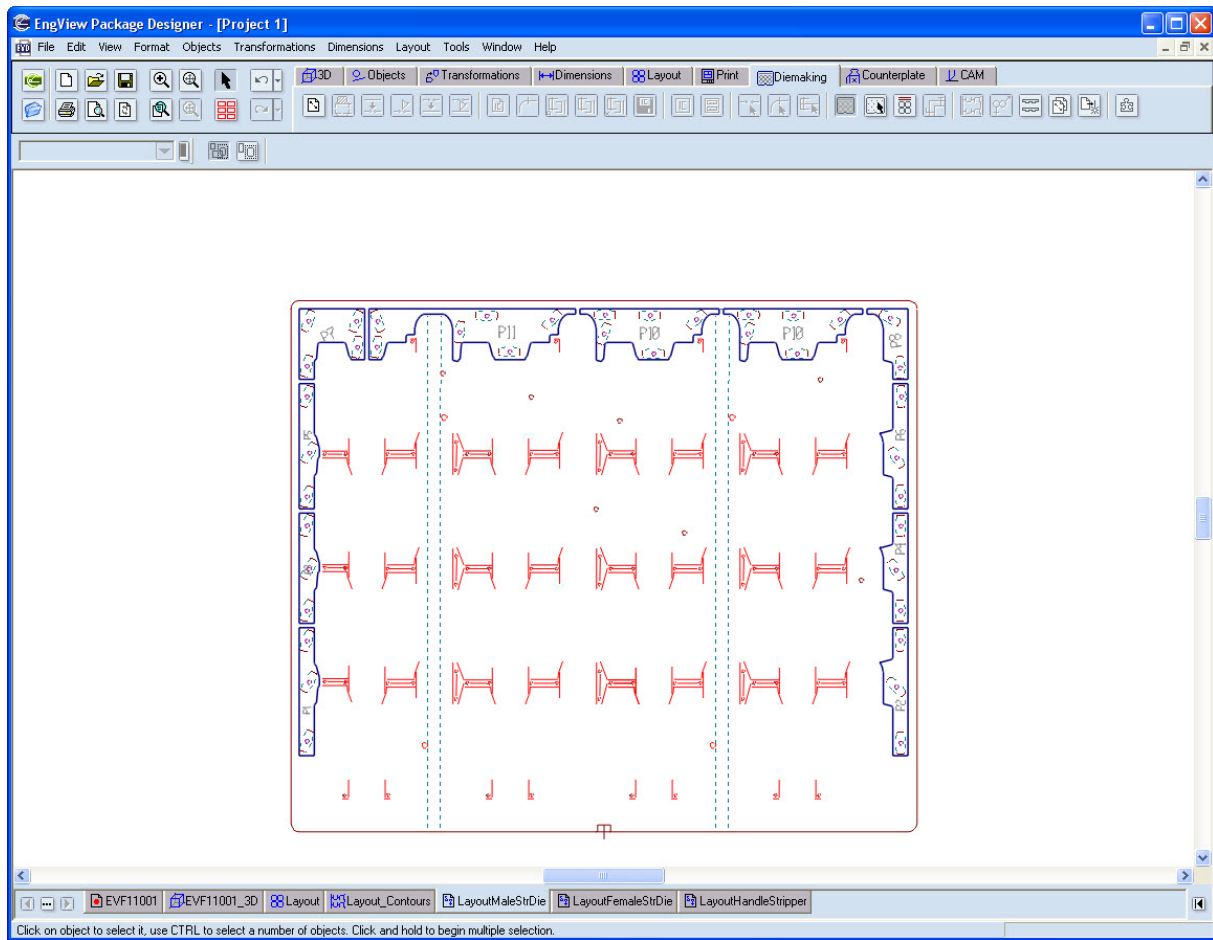
## Placing mounting bars onto the male stripping die

1. On the Diemaking toolbar, click **Stripping Die Components** .

A contextual edit bar appears above the graphical area. In them you can set your own hole offsets for positioning the bar.

2. In the contextual edit bar, in **Components**, click the down arrow, and click Male Bar.





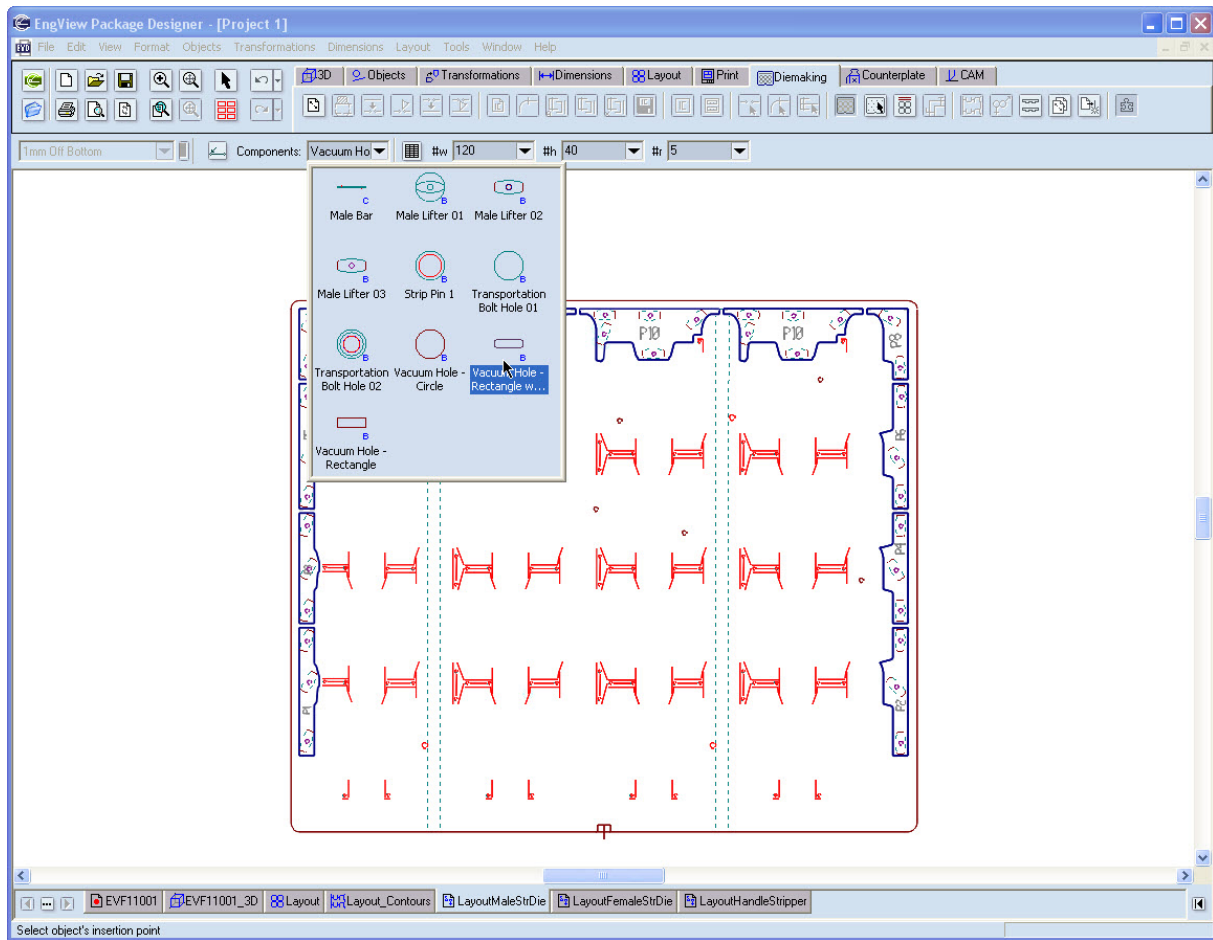
*Two mounting bars have been placed.*

## Placing vacuum holes

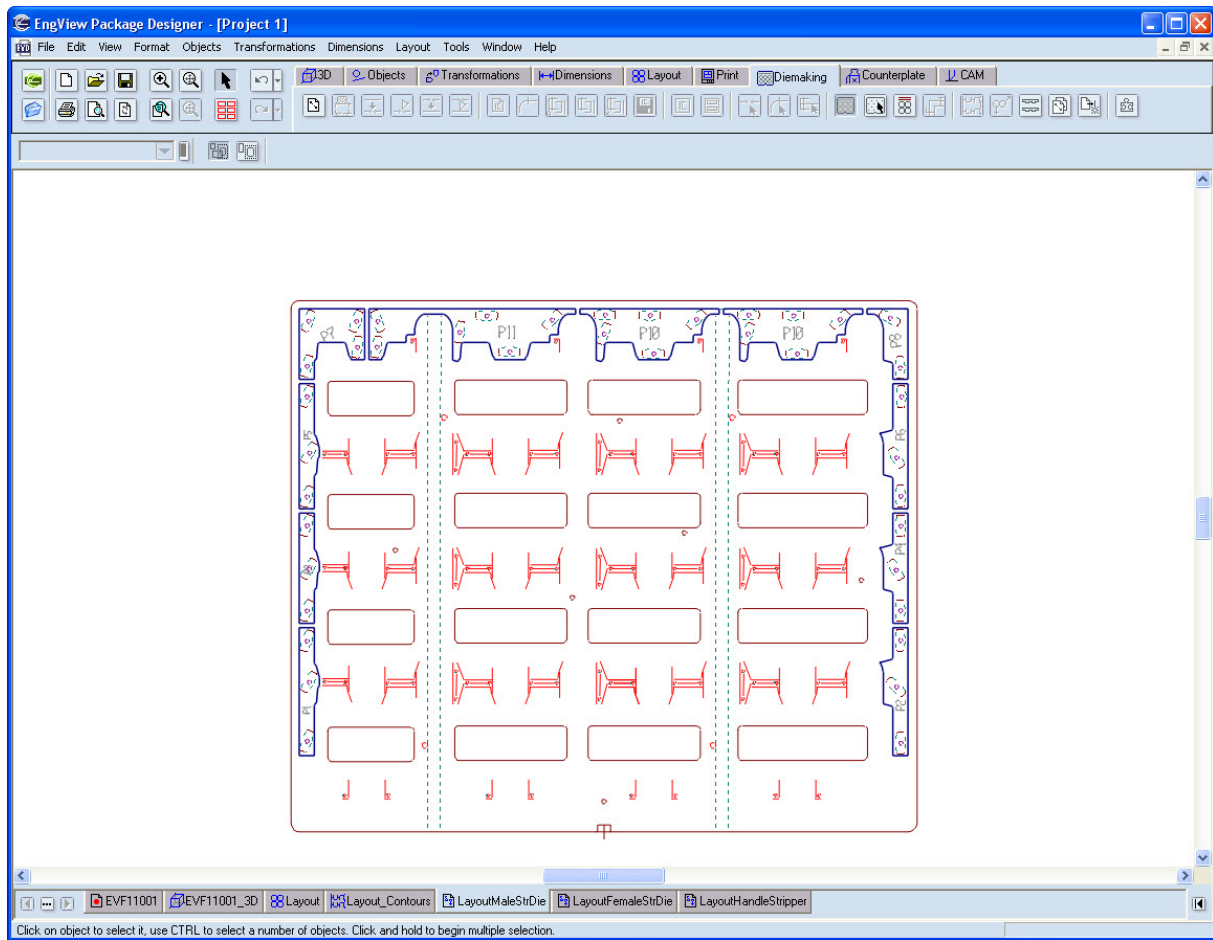
1. On the Diemaking toolbar, click **Stripping Die Components** .

NOTE: The use of preset components is optional. These vacuum holes can be drawn by hand and given a particular style.

2. In the contextual edit bar, in **Components**, click the down arrow, and then click *Vacuum Hole – rectangle with fillets*.



Here the vacuum holes are being positioned. In case it's necessary, the holes can be extended or constricted. This is done in the contextual edit bar.



*The vacuum holes have been added.*

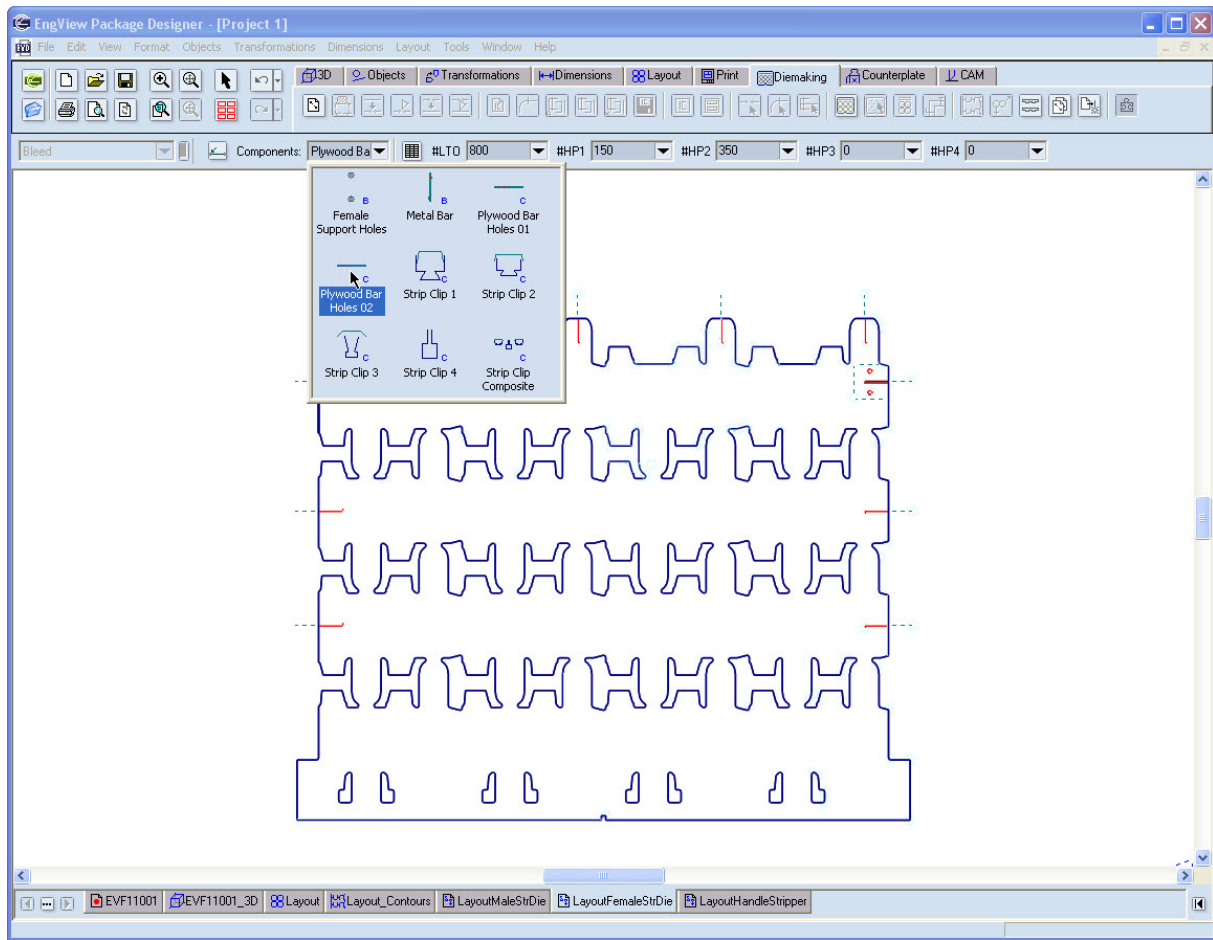
### Placing mounting bars onto the female stripping die

1. On the Diemaking toolbar, click **Stripping Die Components** .

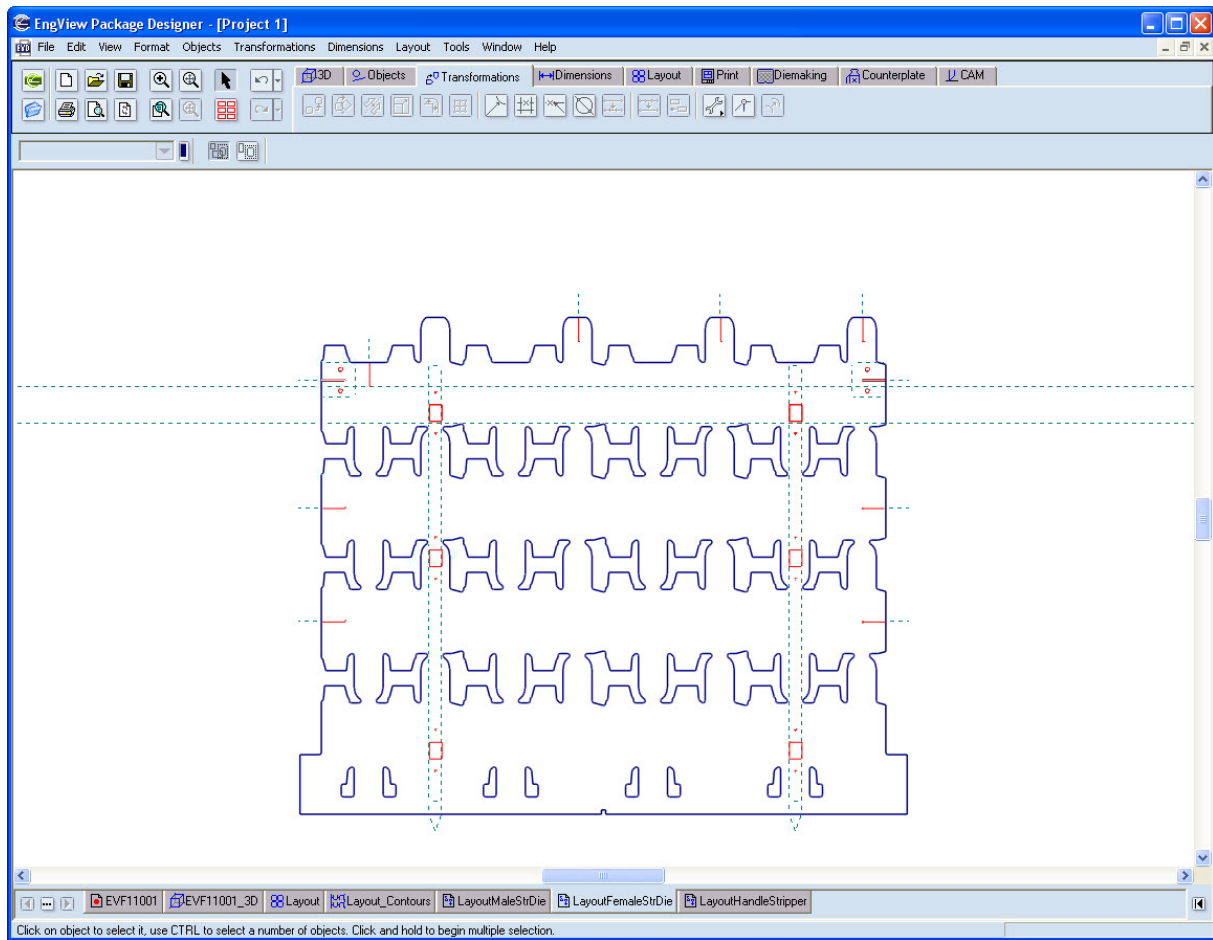
NOTE: A contextual edit bar appears containing parameters for the bar component. In them you can set your own hole offsets for positioning the bar.

2. In the contextual edit bar, in **Components**, click the down arrow, and click *Plywood Bar Holes 02*.





2. Position the two mounting bars where you want them to be.

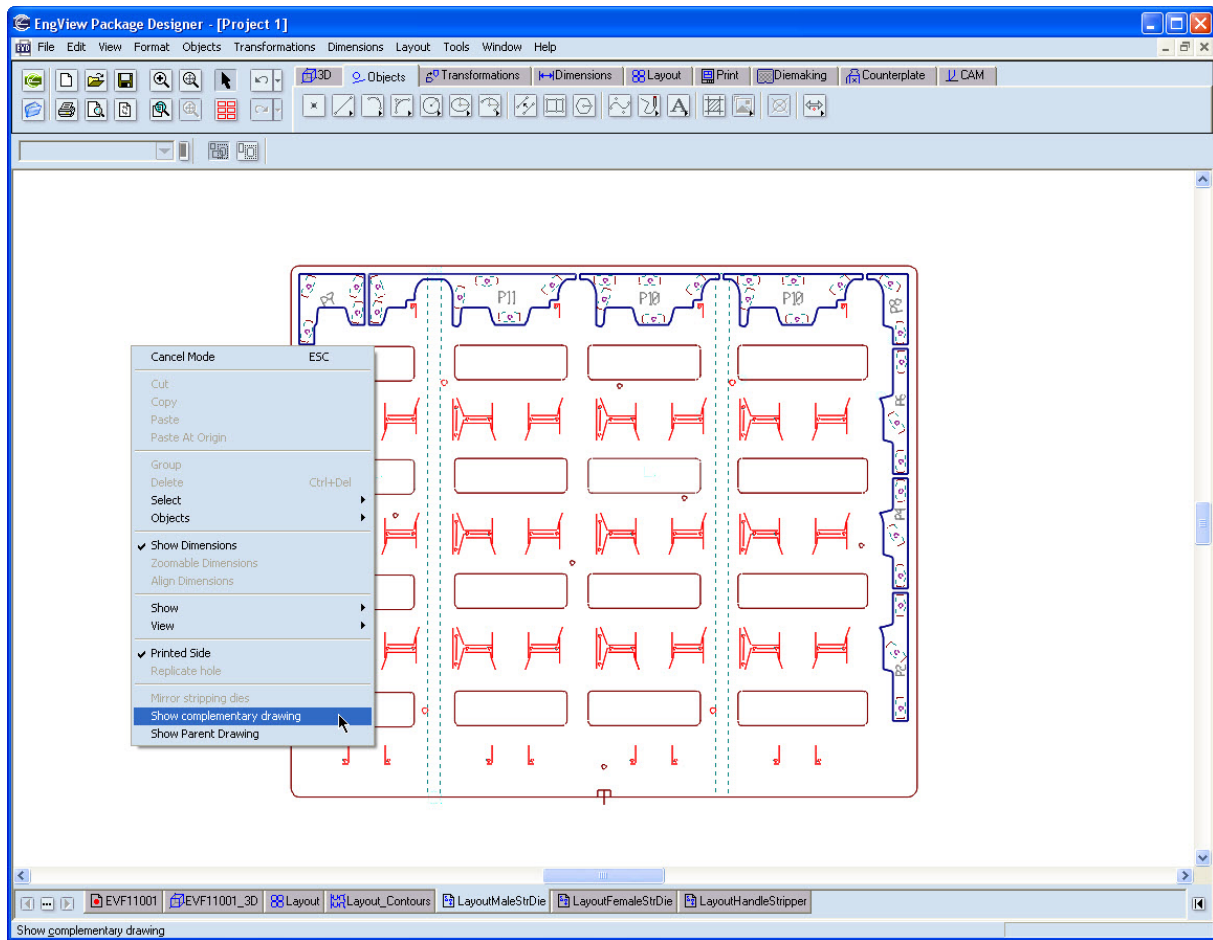


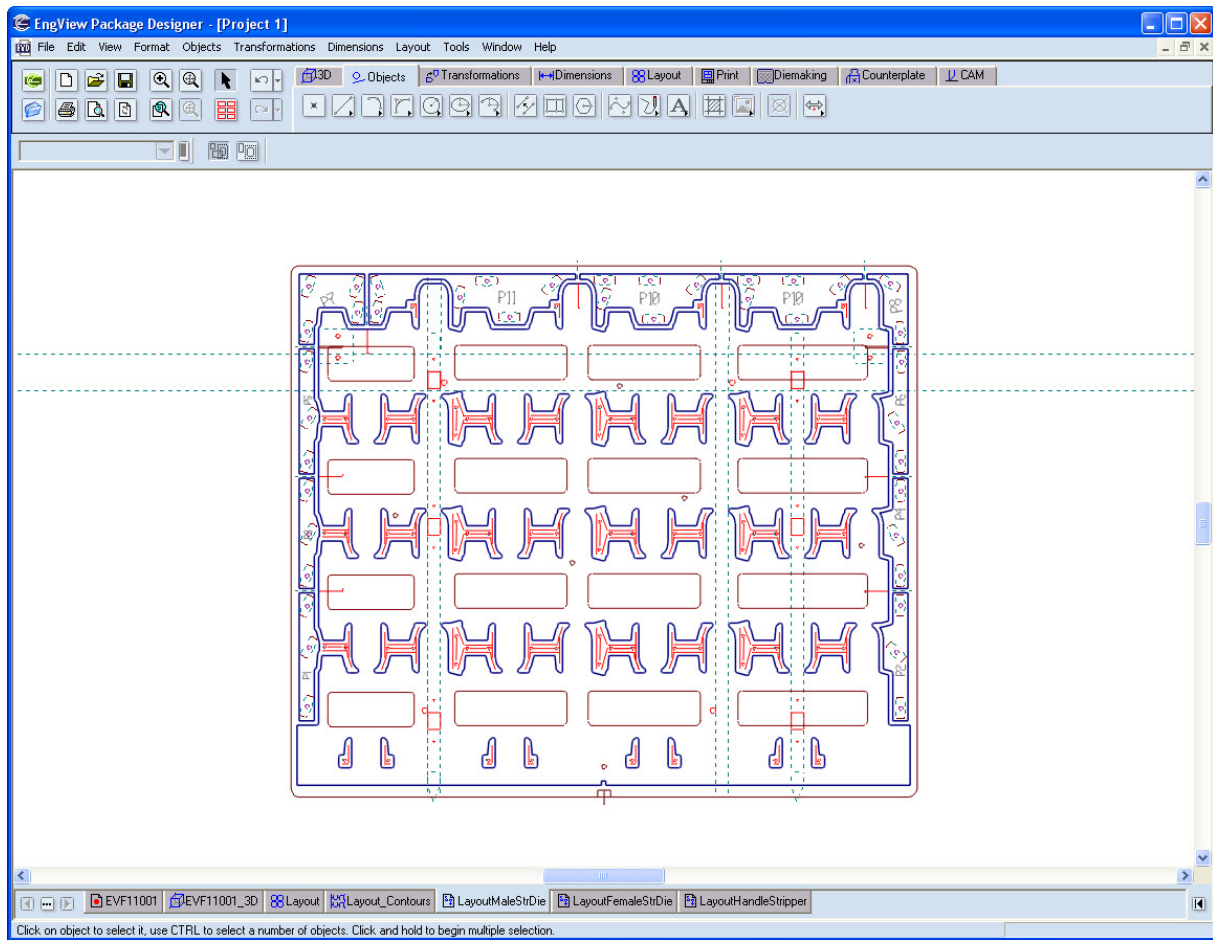
Two bars have been placed. Note the two horizontal lines. They mark the place and the size of the locking tooth, which serves for the mounting of the die onto the machine.

### Placing transportation bolts

We are now back to the male stripping die, in which we must visualize the female stripping die. This is necessary so that the bars in the female die become visible. The transportation bolts must not be positioned where there are bars.

1. To visualize the female stripping die, in the graphical area, click and then on the context menu click **Show complementary drawing**.



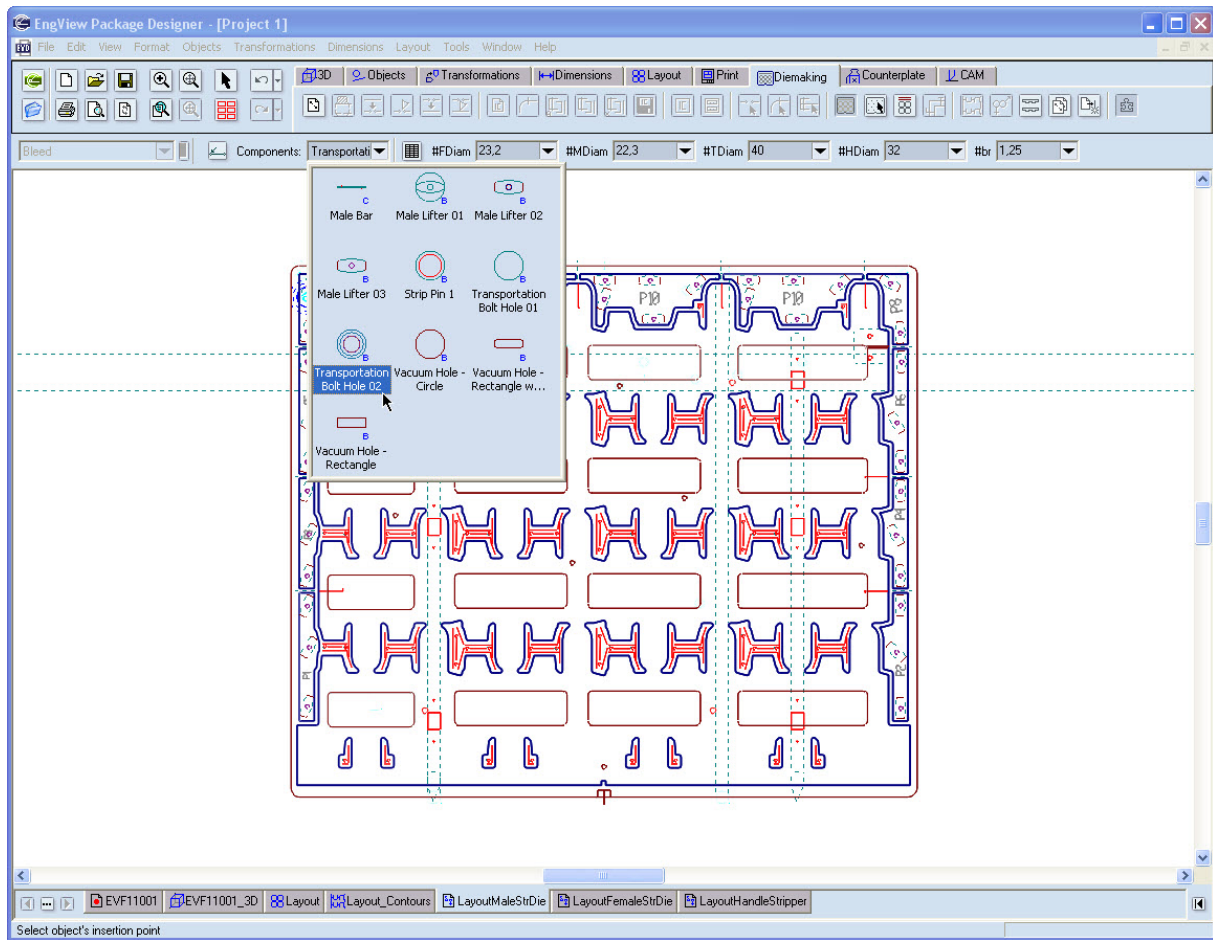


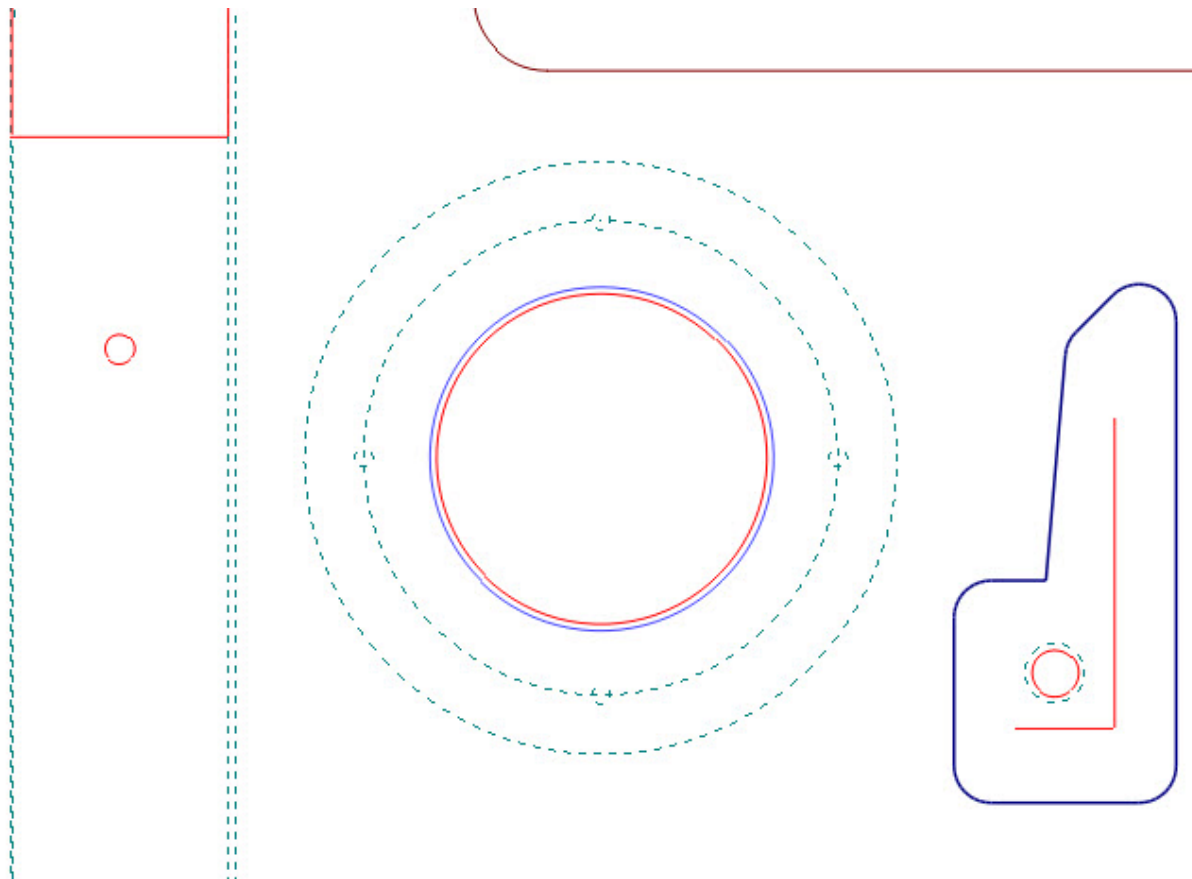
*Both the male and the female stripping dies are visible.*

2. On the Diemaking toolbar, click **Place Strip Clip Components** 

NOTE: A contextual edit bar appears containing parameters for the bar component. In them you can set your own hole offsets for positioning the bar.

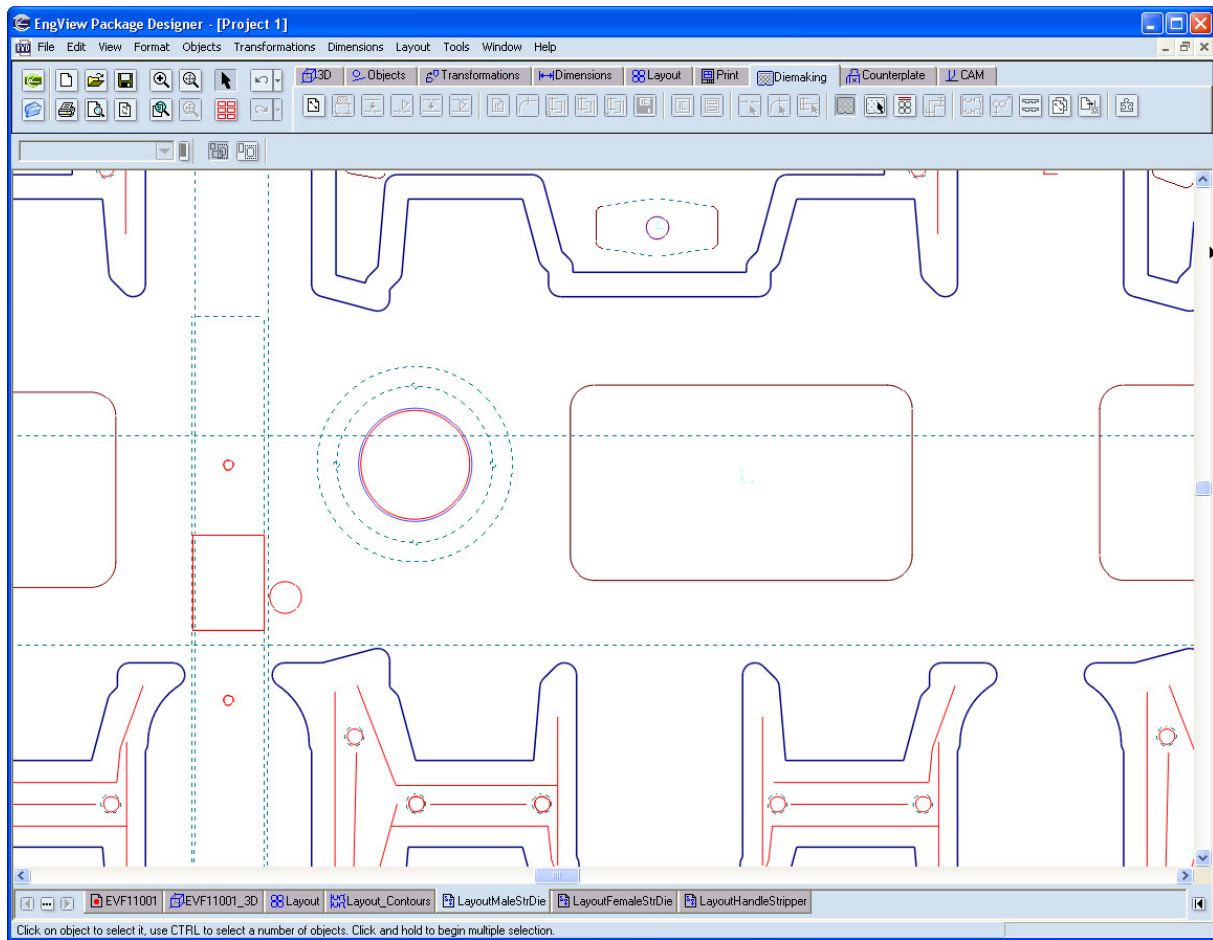
3. In the contextual edit bar, in **Components**, click Transportation Bolt Hole 2.





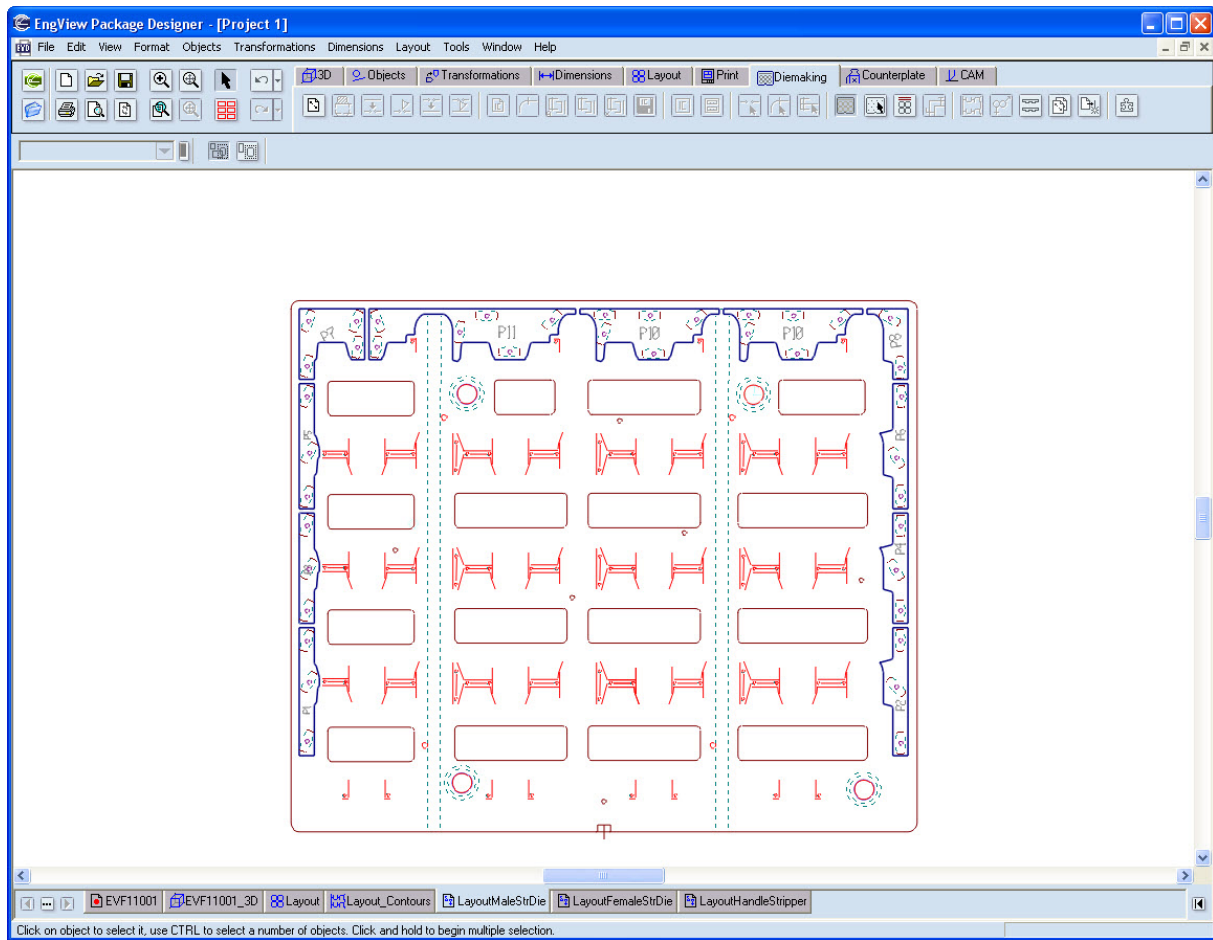
*A positioned bolt hole. The dotted lines mark the physical size of the bolt's bed as it will be mounted on the stripping die.*

If the space is limited, the positioning of the transportation bolts can make necessary the editing of some components that have been already positioned. In the current case we will edit the size of a vacuum hole to make room for the bolt's aperture.



The holes for transportation bolts are positioned. For easier visual comprehension, the female stripping die (the complementary drawing) is here not shown.



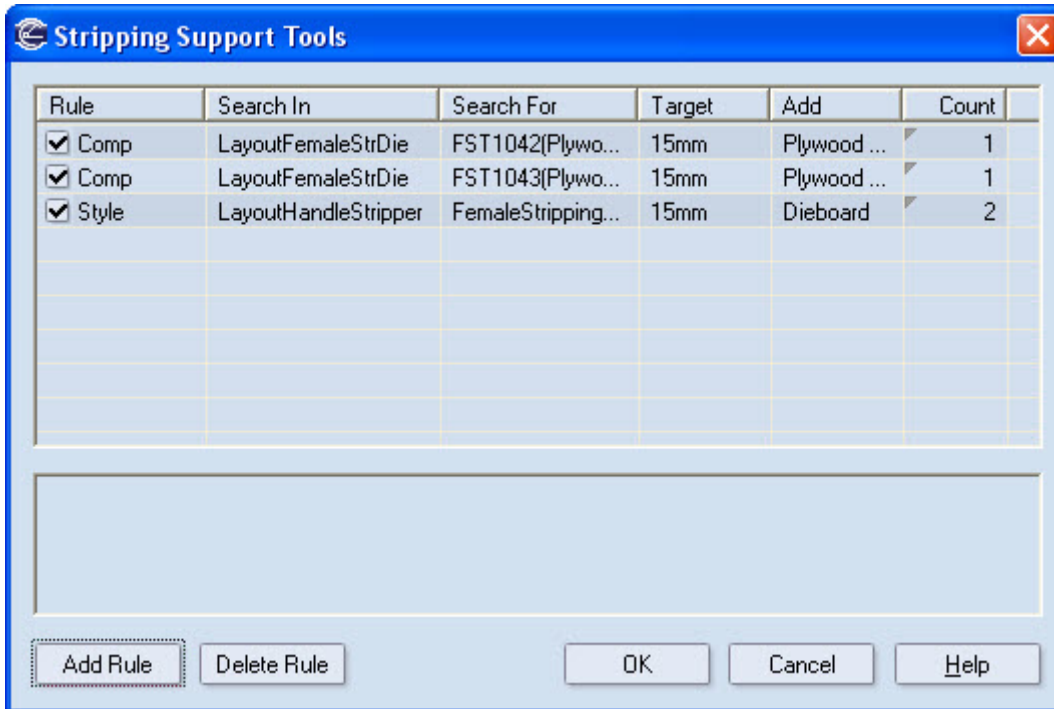


## Designing additional stripping elements

Next we come to cutting the additional elements needed for the stripping process. This includes the cutting (twice) of the female bars and the lower front strippers.

1. On the Diemaking toolbar, click **Generate Support Tools** .

The **Stripping Support Tools** dialog box appears.



The dialog box titled "Stripping Support Tools" contains a table with the following data:

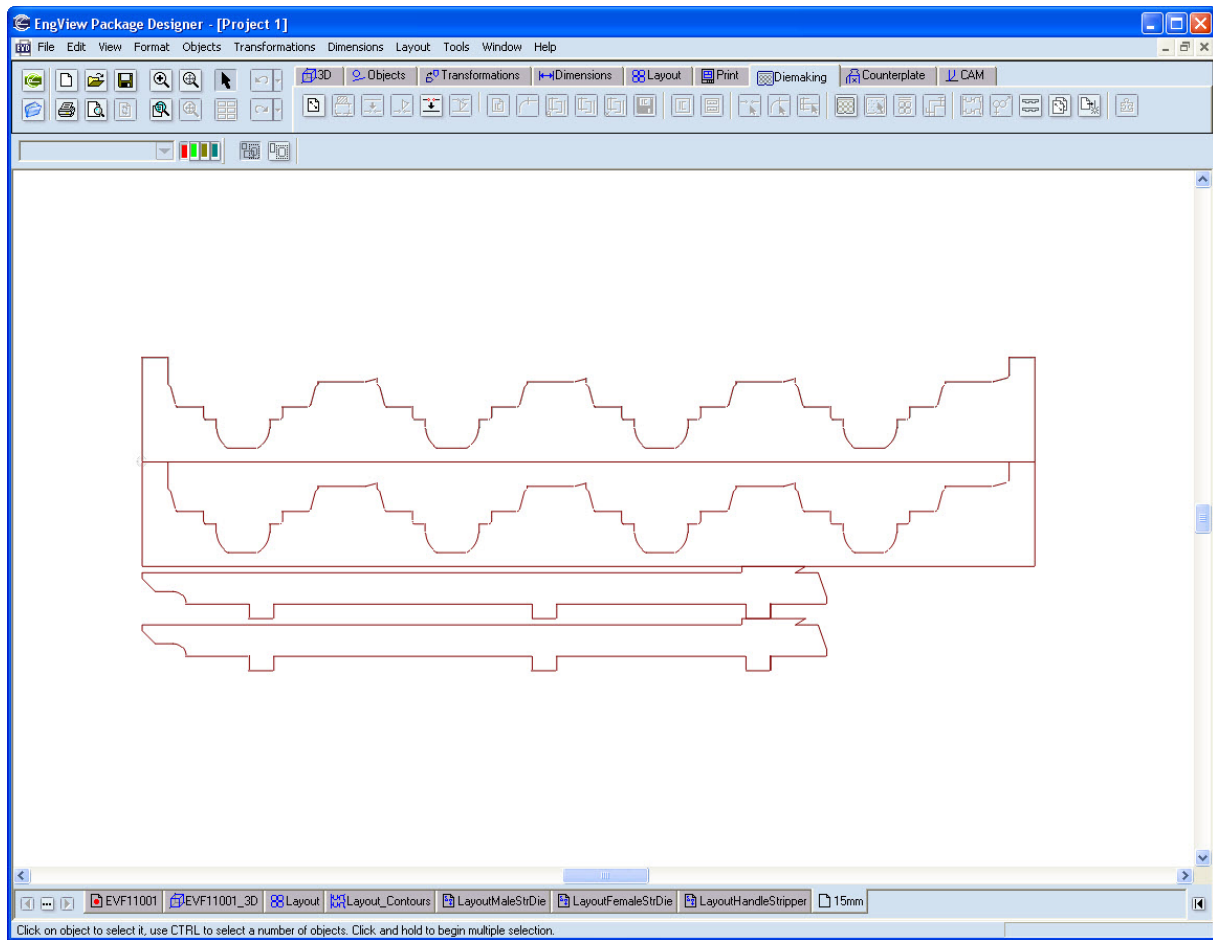
Rule	Search In	Search For	Target	Add	Count
<input checked="" type="checkbox"/> Comp	LayoutFemaleStrDie	FST1042(Plywo...	15mm	Plywood ...	1
<input checked="" type="checkbox"/> Comp	LayoutFemaleStrDie	FST1043(Plywo...	15mm	Plywood ...	1
<input checked="" type="checkbox"/> Style	LayoutHandleStripper	FemaleStripping...	15mm	Dieboard	2

Below the table is a large empty text area. At the bottom are buttons: Add Rule, Delete Rule, OK, Cancel, and Help.

This dialog box contains the rules for the creation of the support instruments. The rules that appear are the default ones, but you can create your own.


2. Create your rules, and then click **OK**.

A new drawing appears after the rules have been created and accepted.

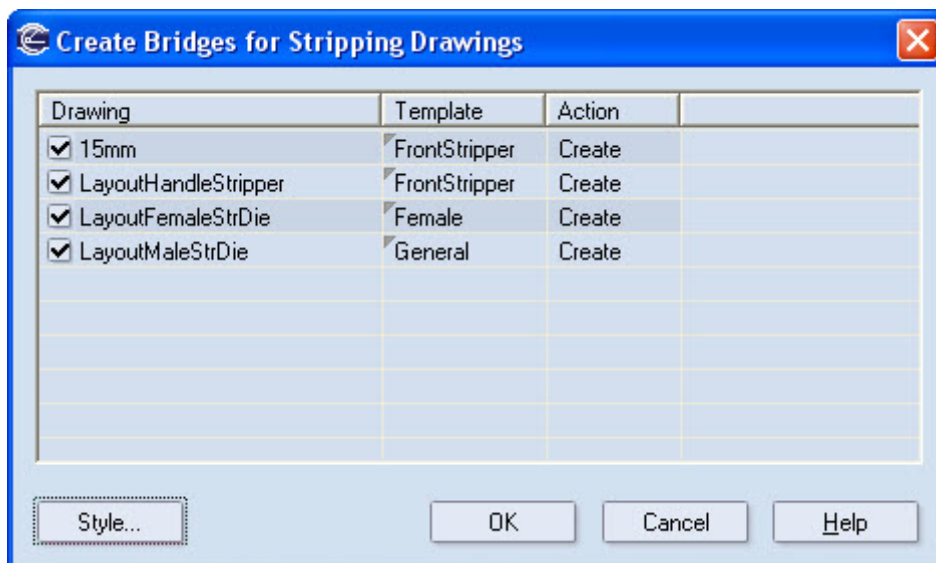


*The lower front stripper and the female plywood bars for the mounting of the female stripping die*

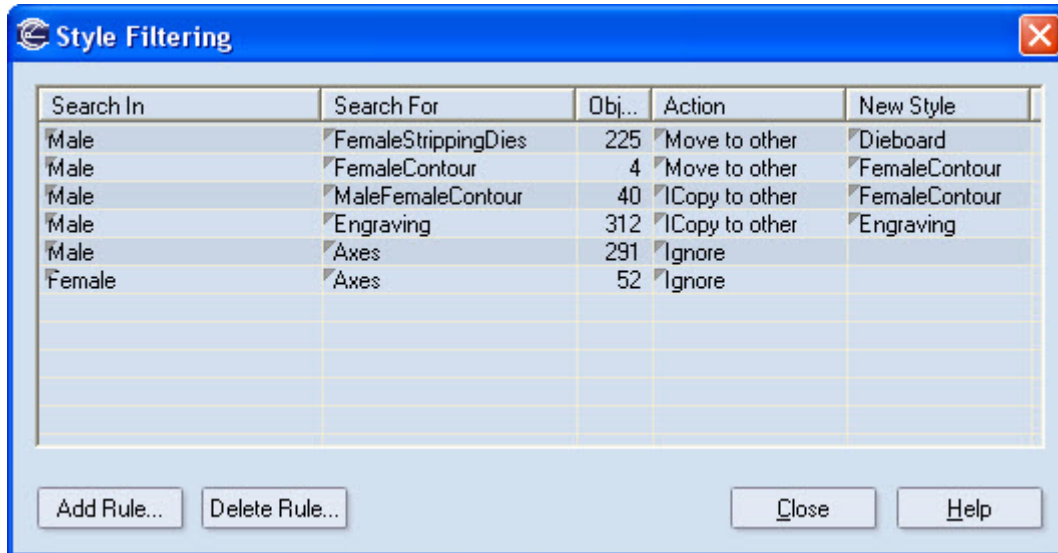
## Creating bridge drawings

1. On the Diemaking toolbar, click **Generate All Bridges** .

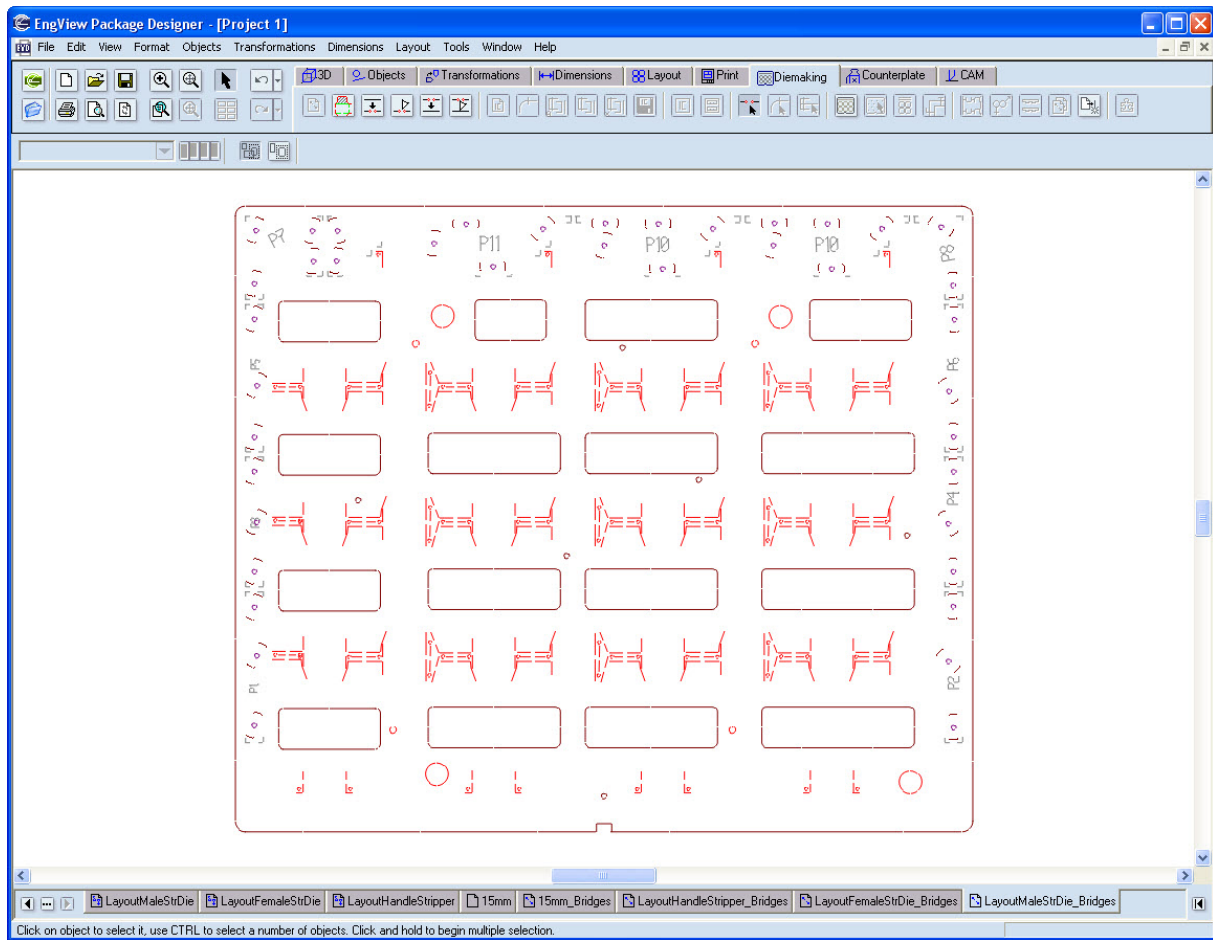
The **Create Bridges for Stripping Drawings** dialog box appears.



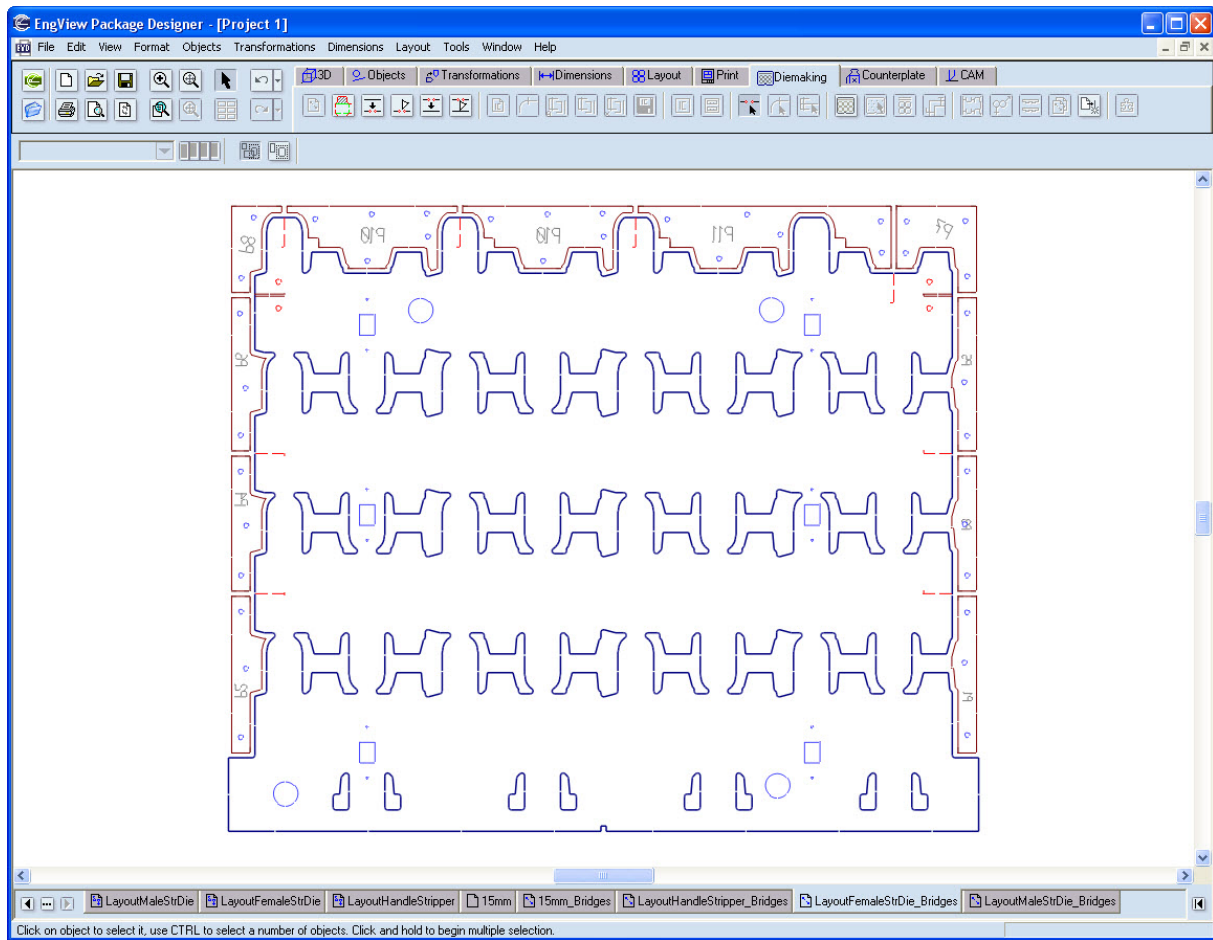
This dialog box lists the bridge templates that will be applied in the stripping dies. Rules for the transfer of objects between the male and the female dies are applied separately. An example is the transportation bolt hole, which is positioned into the male stripping die during the design. A corresponding hole is necessary for it also in the female die.



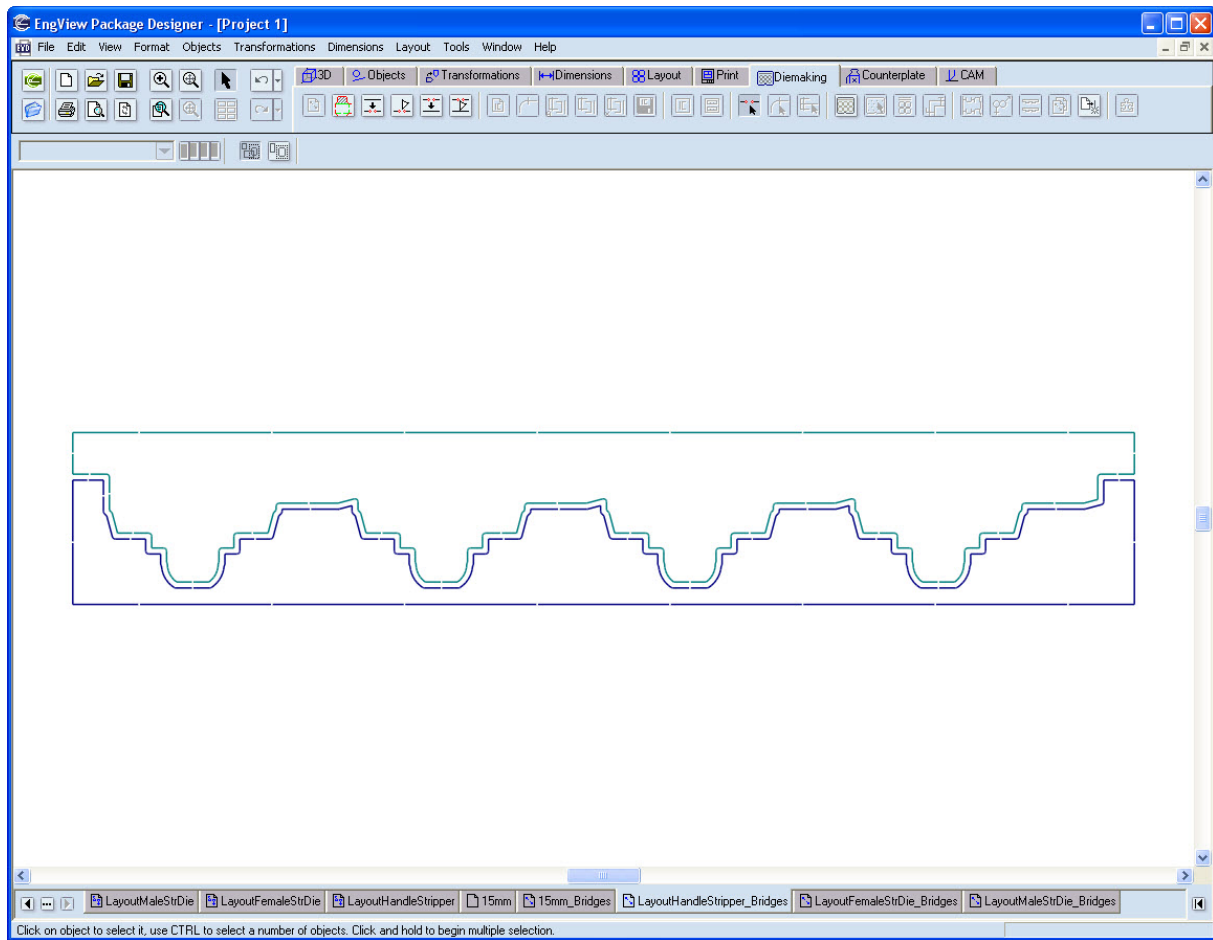
2. After the association of a bridge template for each drawing, individual bridge drawings are created that show how each bridge template is applied. These are the actual projects for cutting the stripping instruments.



*The male stripping die*

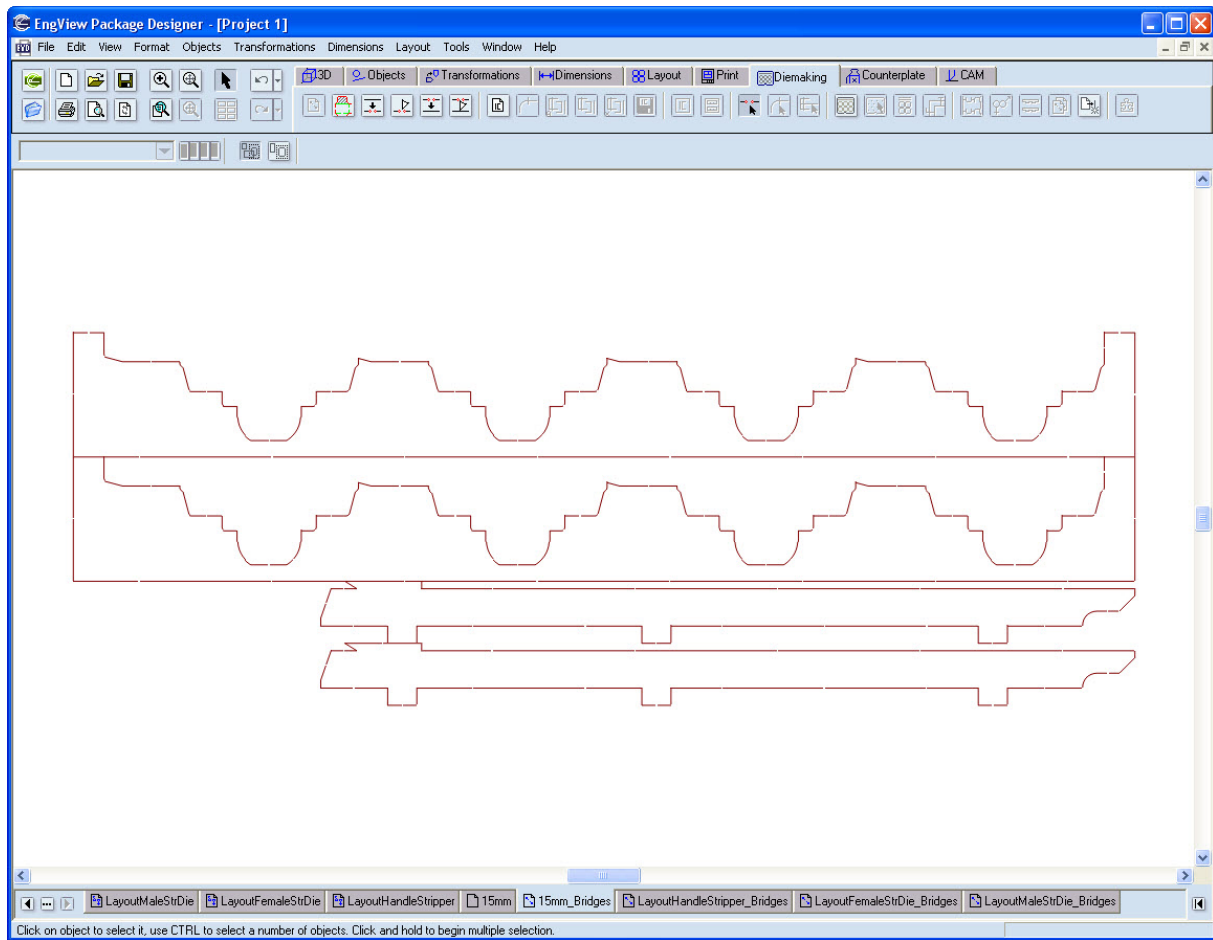


*The female stripping die with wooden chunks (on the periphery) that will be mounted on the male stripping die.*



*The front stripper*





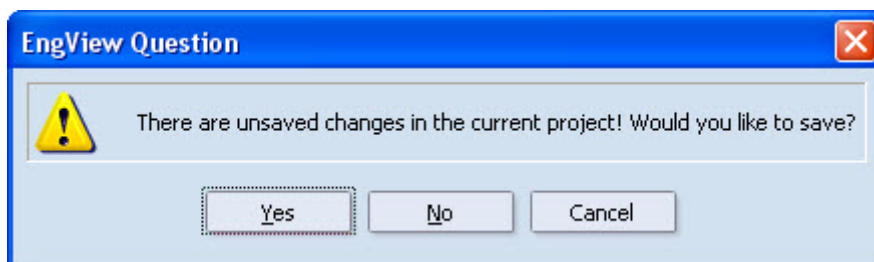
*Bridge drawing of the support instruments*

### Adding bridge drawings to the pool

The pooling functionality manages the combination of individual dieboard jobs that are cut at once. This combining is done in a layout drawing on which all wooden tool projects (cutting dies and stripping dies) are distributed across a single master board. The laying out of the cutting boards can be automatic or manual.

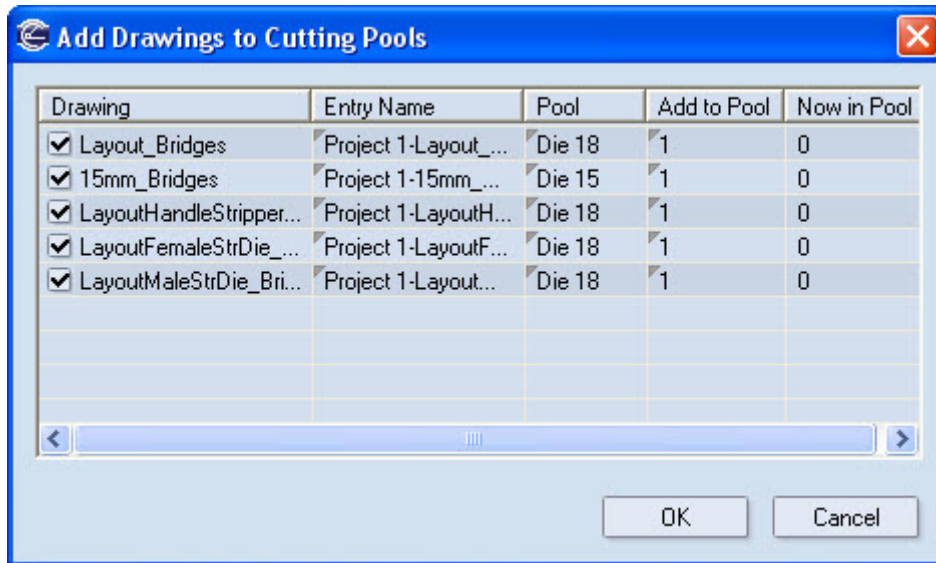
1. On the Diemaking toolbar, click **Add to pool** .

If your project contains unsaved changes, a dialog box will appear, prompting you to save the project before continuing.



2. Click **Yes**.

The **Add Drawings to Cutting Pools** dialog box appears.

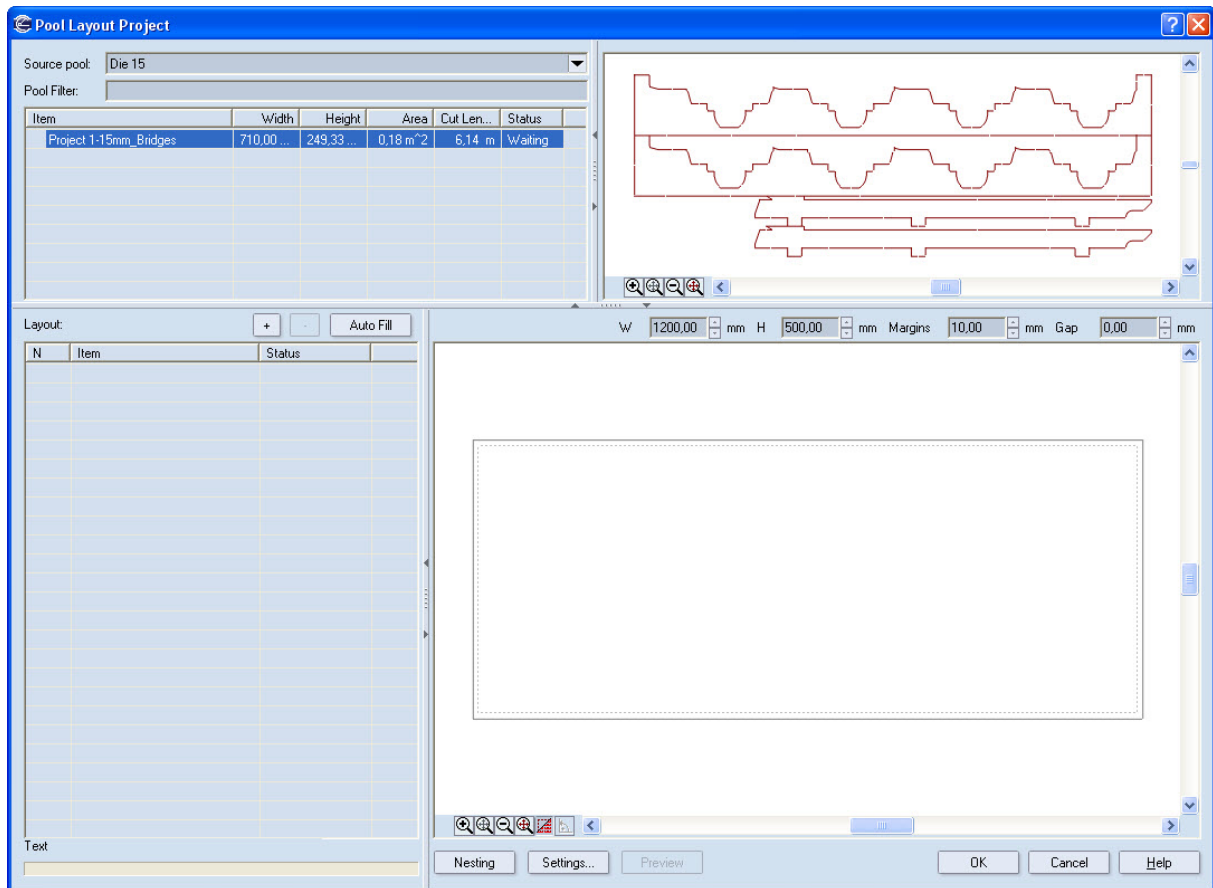


The program lists all bridge drawings. Now we will choose which drawings to add to which pool.

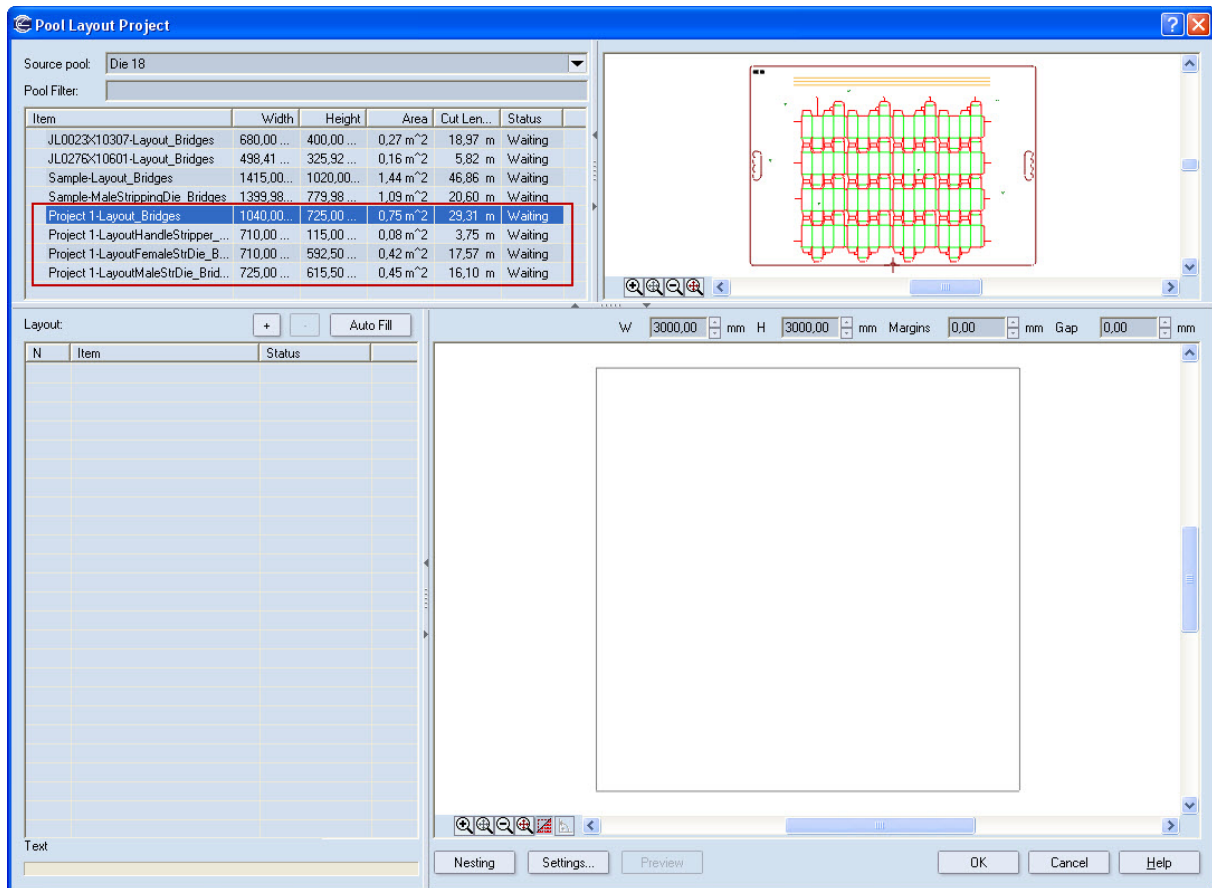
3. Select the drawings that you want added to the pools.
4. In the **Pool** column, use the drop-down lists to select a pool for the respective drawing.
5. On the **Layout** menu, click **New Pool-Layout Project**.

The **Pool Layout Project** dialog box opens.

The 15mm\_Bridge drawing is added to the Die15 pool. The rest of the bridge drawings are added in the Die18 pool. To be cut, they must be inserted into the master layout board.



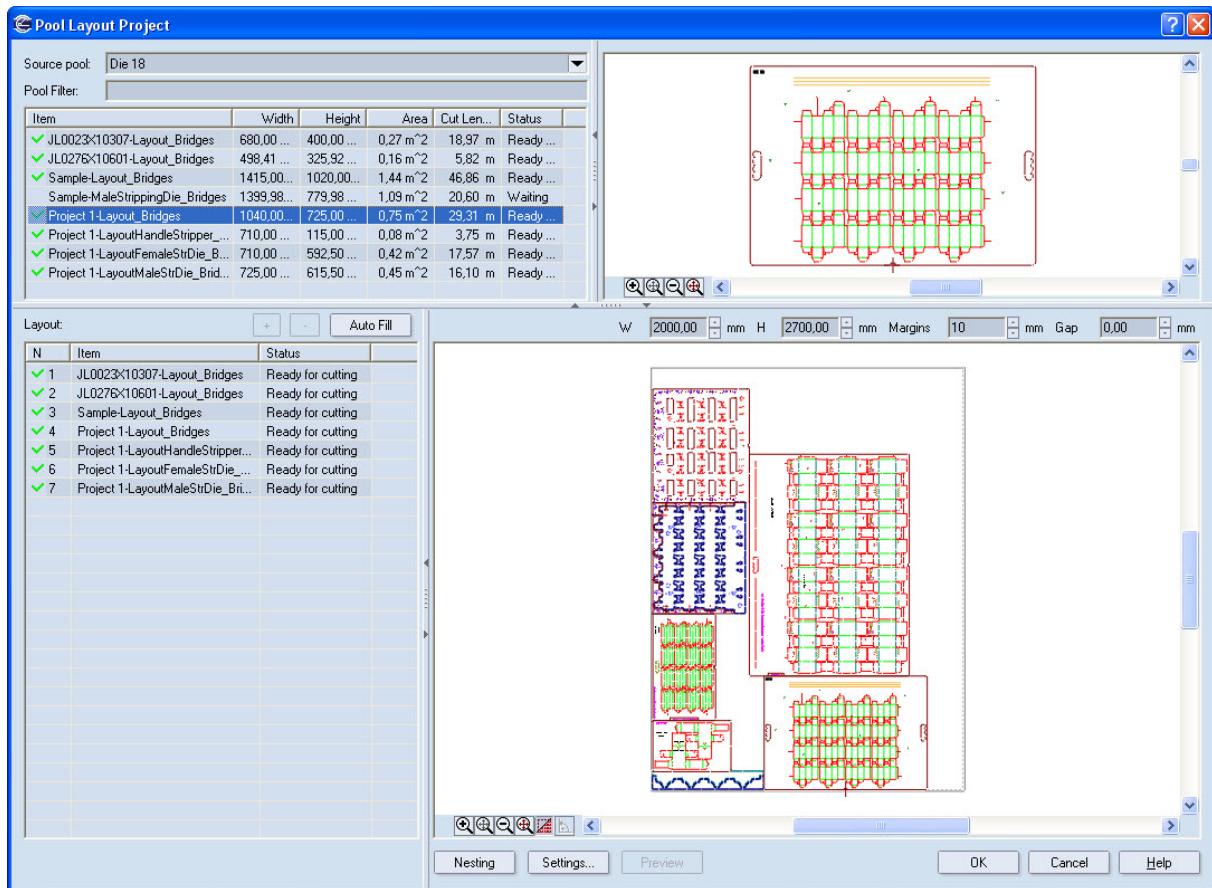
6. In **Source pool**, select the Die18 pool.



*The highlighted rows contain the newly added drawings.*

7. Insert the drawings into the master layout board.

NOTE: If you want these particular drawings to be cut, insert them manually. Otherwise, you can use the Auto Fill functionality, which will offer optimal inserting based on the current nesting method.



NOTE: Before cutting the master layout board, it must be saved as an EVD file.

4. Click **OK**.

NOTE: The EVD file can then be opened and a CAM job can be sent to the laser cutter.

A **Save Project** dialog box appears.



5. Save the master layout as an EVD file.