



Introduction

Protocase Designer® is a free downloadable **3D computer aided design (CAD) enclosure design application**. It is user friendly and simple to use. The goal of the design team was to make this application as intuitive as possible, thus minimizing the learning curve and for the user. Also, by offering this software free of charge, clients can avoid spending excessive dollars on costly mechanical CAD software.

Protocase Designer® is based on **templates**, a starting point for designing an enclosure or panel, and allows the user to customize the enclosure to their specific needs. Protocase Designer® currently hosts four templates, which are:

1. **Rack mount template**
2. **U-shape template**
3. **L-shape template**
4. **Flat panel template**

This user guide has been designed to assist the user to understand the basic functionality of Protocase Designer. Apart from this user guide, we also have tutorials intended to explore the basics of enclosure design, silk-screening and self-clinching fasteners among others in our tutorial homepage.

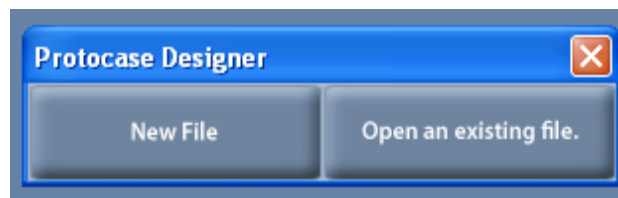
Download Protocase Designer®

- a. Download Protocase Designer (<http://www.protocasedesigner.com/download.html>)
- b. Run the Protocase Designer installer and follow the on screen instructions .

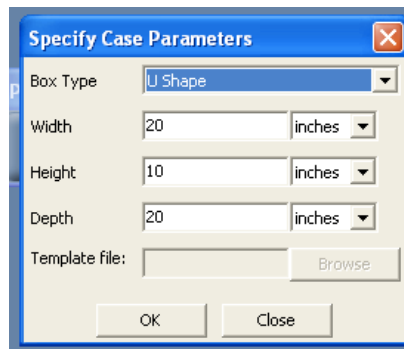
How to ... ?

3.1 Create a new file

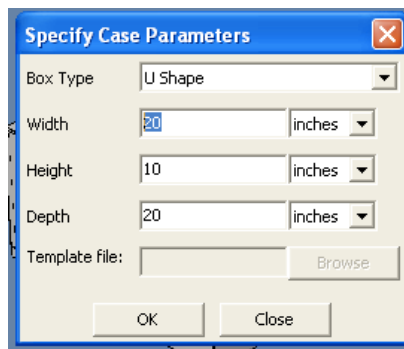
- a. To create a new file if your application is not active
 - i. Open Protocase Designer
 - ii. Click the New button



- iii. Choose one of the custom enclosure templates (Rack Mount, U Shape L Shape or Flat Panel) you want to design.

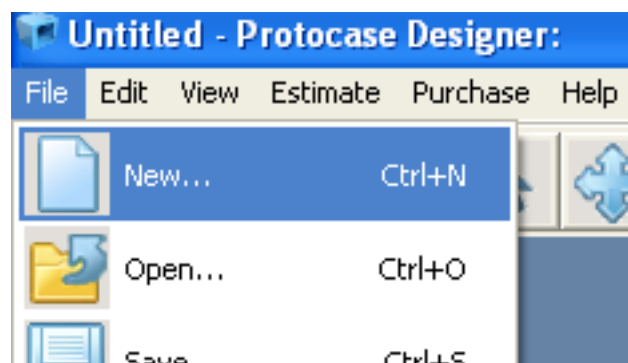


- iv. Enter the dimensions

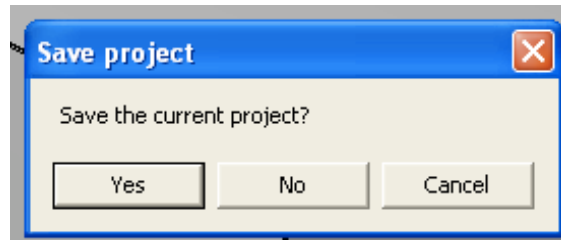


b. To create a new file if your application is active

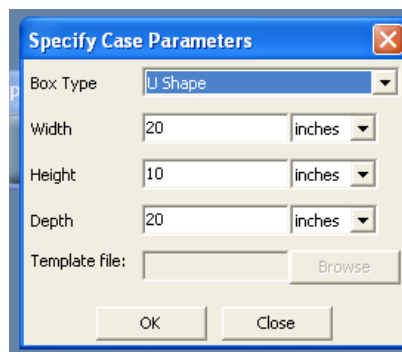
- i. Click the File menu
- ii. Click New



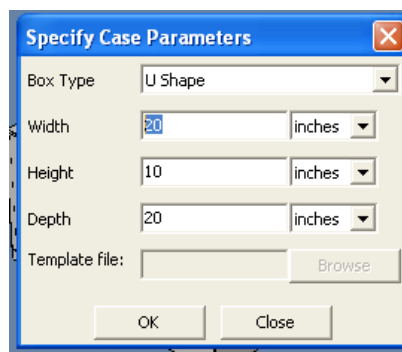
iii. Click either Yes or No to save the existing file



iv. Choose one of the custom enclosure (Rack Mount, U Shape, L Shape or Flat Panel) you want to design



iv. Enter the dimensions



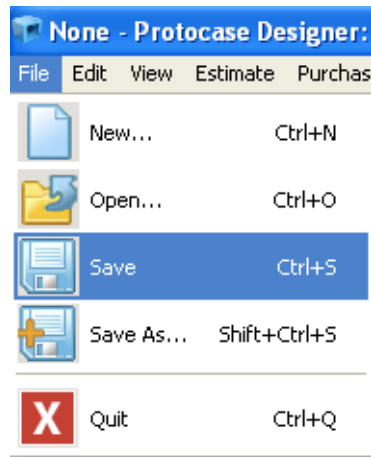
Note: Please note that the dimension of the enclosure can always be seen by clicking Edit then clicking Resize Case.



Save a file

To save a file

- i. Click the File menu
- ii. Click Save

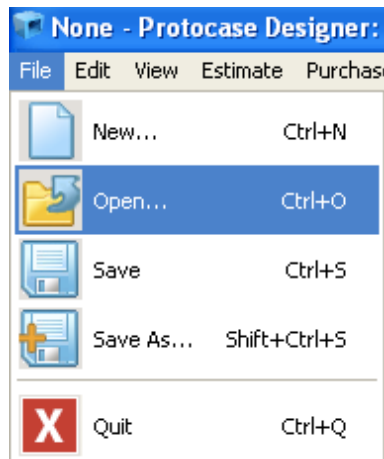


- iii. Choose your file name and the location where you want to save the file

Open a file

To open a file

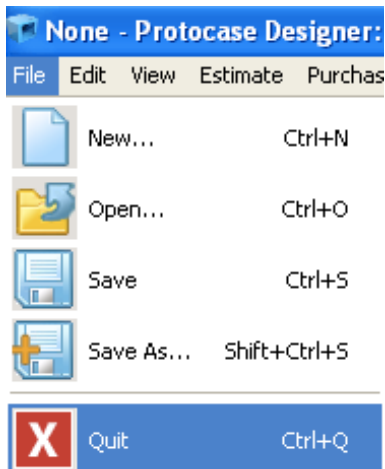
- i. Click the File menu
- ii. Click Open
- iii. Select the file name to open



Exit from the tool

To exit from the tool

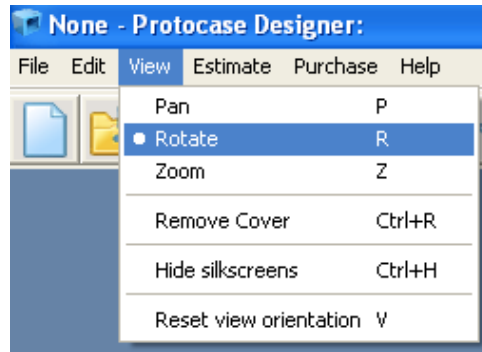
- i. Click the File menu



- ii. Click Exit
- iii. Click either Yes or No to save the file

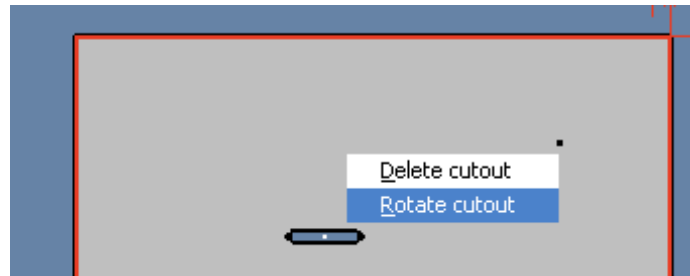
Rotate

- a. Rotate the enclosure
 - i. Click View

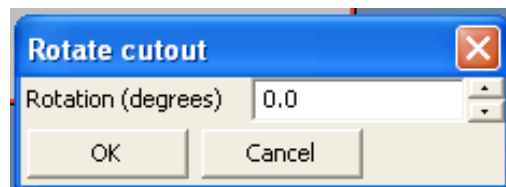


- ii. Click Rotate
 - iii. Click the left mouse button and move your mouse pointer

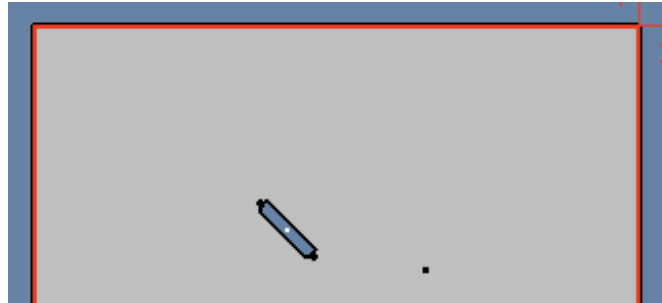
- b. Rotate the cutouts: rectangular, circular and ports



- i. Right click the cutouts (here Db 37) and select 'Rotate Cutout'.

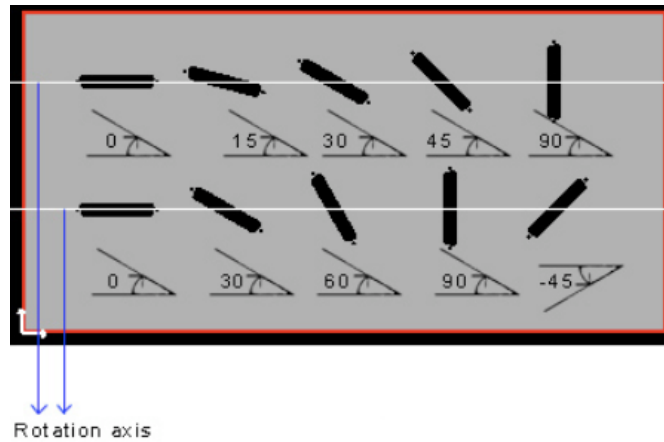


- ii. Enter the angle of rotation. **Note:** the angle of rotation is calculated in degrees.



III.The result is shown below.

Note:The rotation always takes place with respect to the horizontal axis, even if you are rotating an object for the second time. For an example if you rotate DB port to 30 degrees and if you want to rotate the same DB port again to 90, you should rotate the DB port to 90 degrees instead of rotating

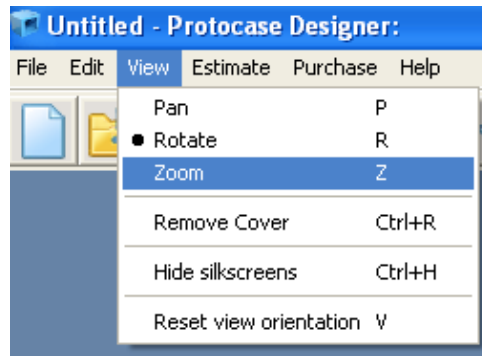


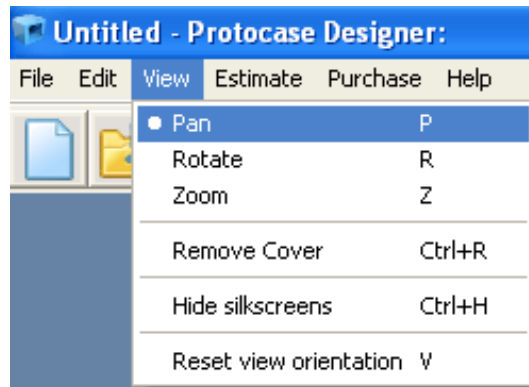
it to 60 degrees. For an example let's rotate the DB 37 in various degrees.

Zoom

To zoom in and out

- i. Click View
- ii. Click Zoom
- iii. Click the left mouse button and move your mouse pointer.





Move the enclosure

To move the enclosure from one place to another within the screen

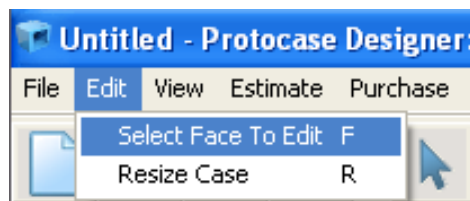
- i. Click View
- ii. Click Pan
- iii. Click the left mouse button and move your mouse pointer.

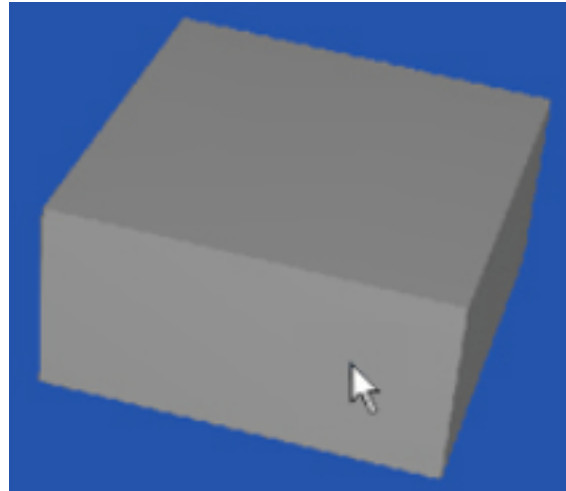
How to design?

The design process starts by selecting a face of the enclosure which is done in the Face Editor. In the Face Editor you can design

- cutouts: like circles and rectangles
- standard ports: like DB-9, DB-15,
- studs, nuts and standoffs
- custom cutouts with the help of the Component Manager

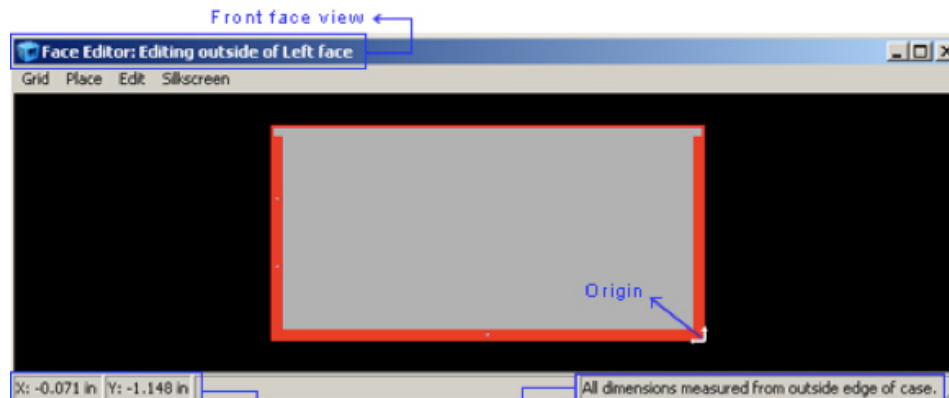
To start designing select a face of the enclosure. You may even remove the cover if you wish to. To remove cover click View and click remove cover.





Select a face

- To select a face
 - i. Click Edit
 - ii. Click Select Face to Edit



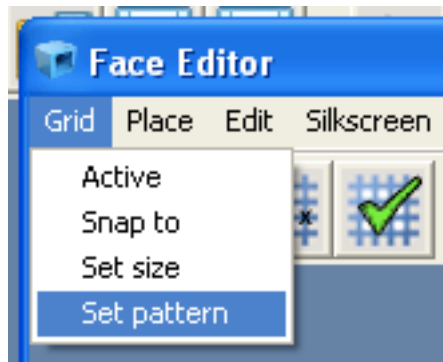
- iii. select a face by placing the mouse pointer over the face you wish to edit.

Note: After you select a face a child window (the Face Editor screen) will pop up. The face editor shows a 2D view of the face. Please view the three blue rectangles as shown in the image below. Depending upon the face you select, the origin can be either on the left bottom or on the right bottom part of the design.

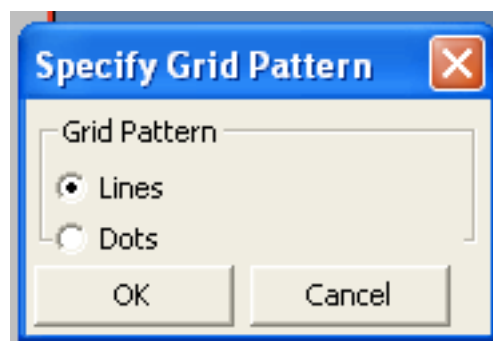
Activate the grid?

We would encourage you to activate the grid before you start designing on the face. There are two patterns/types of grids: **Lines** and **Dots**. Below you will learn on how to set, choose and activate the grid.

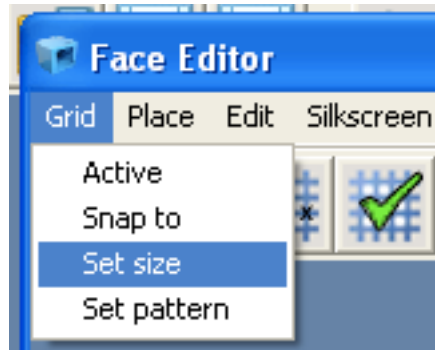
- a. Choose the grid pattern
 - o To choose a grid pattern
 - i. Click Grid
 - ii. Click Set Pattern



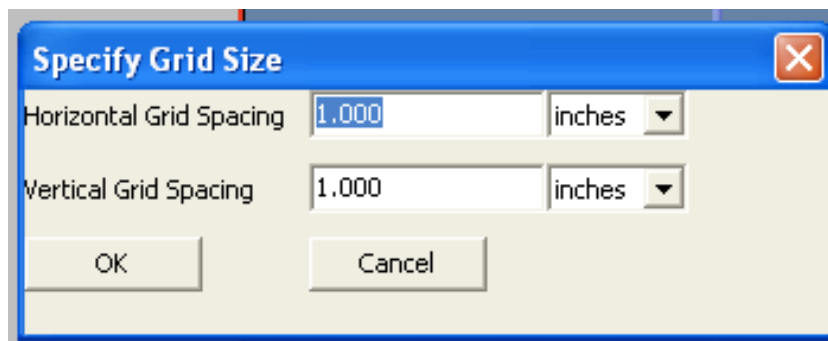
- iii. Select the Grid Pattern: either Lines or Dots
- iv. Click Ok



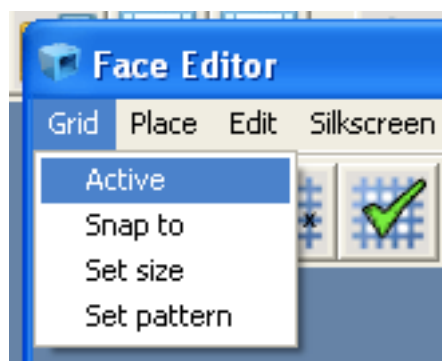
- b. Set grid size
 - o To set grid pattern
 - i. Click Grid
 - ii. Click Set Size



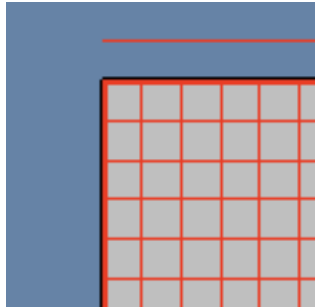
- iii. Enter the grid size
 - iv. Click Ok



- c. Activate the grid
 - o To activate the grid
 - i. Click Grid
 - ii. Click Active



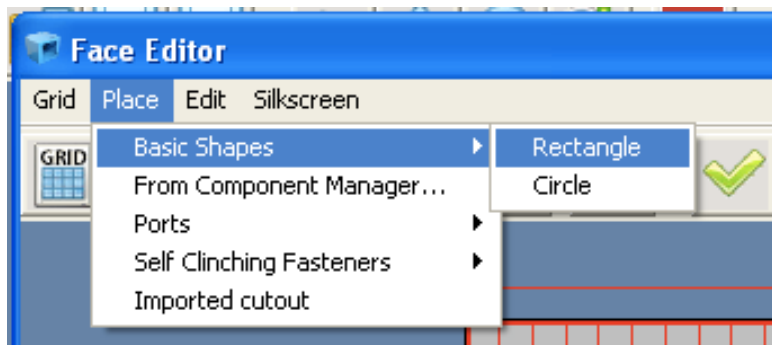
If you selected Lines as your Grid Pattern you should see a screen as shown below.



Place basic shapes, ports and self-clinching fasteners on the face

a. Place a rectangle

- o To place a rectangle
 - i. Click Place
 - ii. Click Basic Shapes
 - iii. Click Rectangle



- iv. In the selected face click the left-mouse button and drag till you draw your rectangle.

Note: For more information on the rectangle measurements and reference point please take a look at the image shown below.

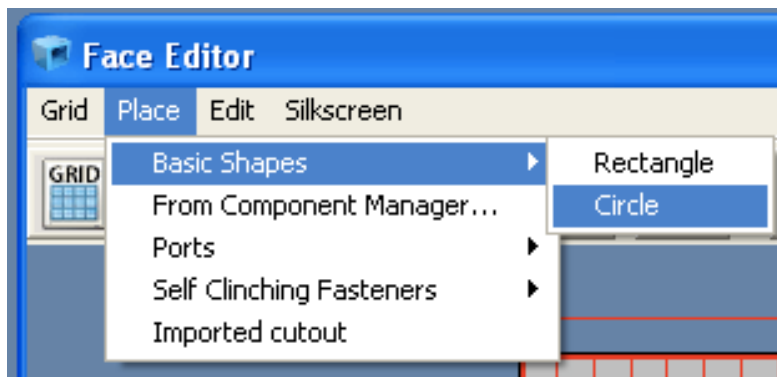


Delete and change rectangle cutout

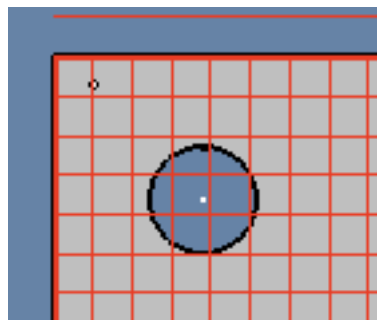
1. To delete the rectangle cutout; right click the rectangle and click Delete Cutout.
2. To change the property of the rectangle; click Cutouts, click Properties and click the rectangle.

b. Place a circle

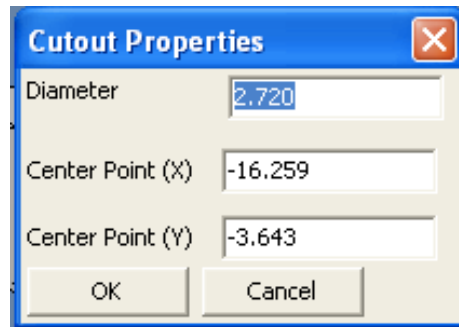
- o To place a circle
 - i. Click Place
 - ii. Click Basic Shapes
 - iii. Click Circle



- iv. In the selected face click the left-mouse button and drag till you draw your circle



Note: For more information on the circle reference point please review the image shown below.

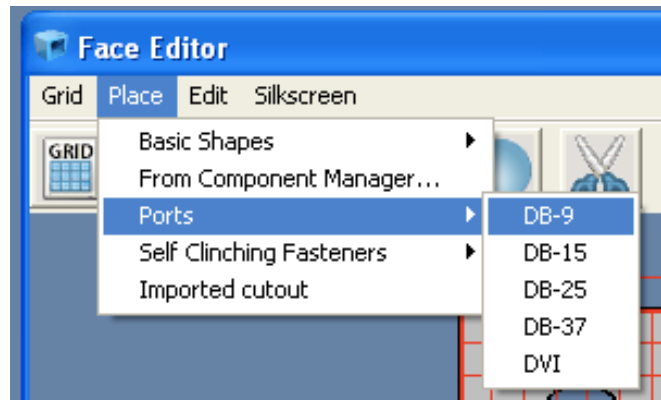


Delete and change circular cutout

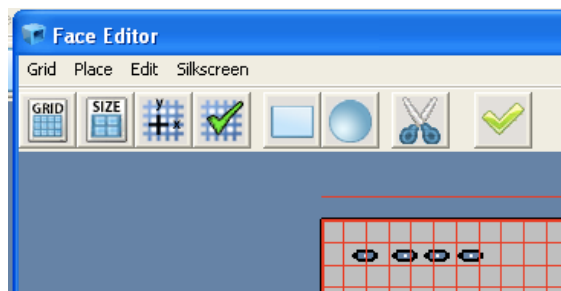
1. To delete the circular cutout; right click the circle and click Delete Cutout.
2. To change the property of the circle; click Cutouts, click Properties and click the circle.

c. Place a serial port cutout

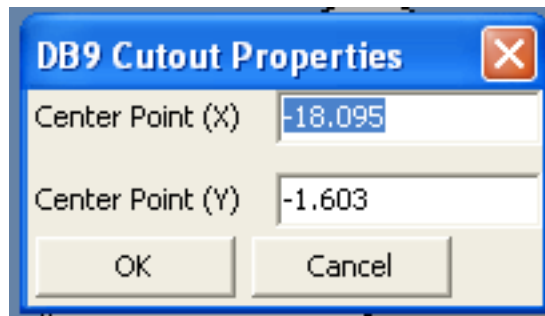
- o To place a serial port cutout
 - i. Click Place
 - ii. Click Ports
 - iii. Select one of the ports from the list



iv. In the selected face click the left-mouse button and place the ports.

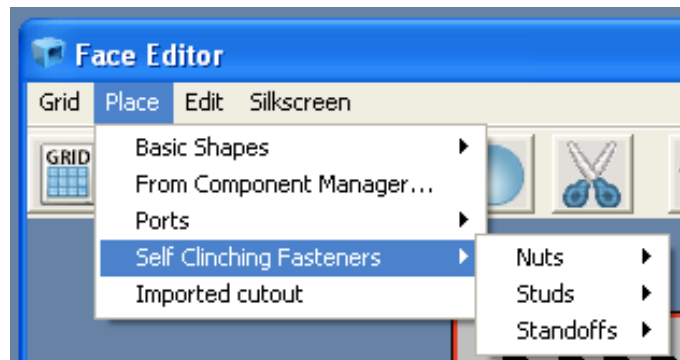


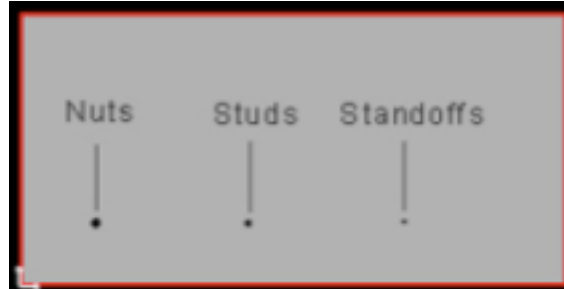
Note: For more information on the port reference point please review the image below.



Delete and change port cutout

1. To delete the port cutout; right click the port and click Delete Cutout.
 2. To change the property of the port; click Cutouts, click Properties and click the port.
- d. Place a self-clinching fastener/PEM
- o To place self-clinching fastener/PEM on the face
 - i. Click Place
 - ii. Click Pems
 - iii. Select one of the Nuts, Studs or Standoffs from the list
 - iv. In the selected face click the left-mouse button and place the self-clinching fastener/PEM.





The Nuts, Studs and Standoffs as see in Protocase Designer® for the above pictures is shown below.



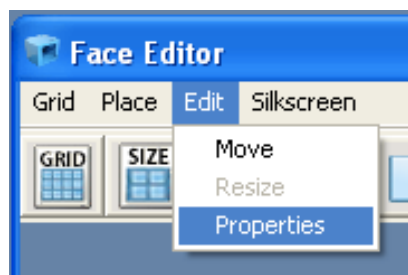
Place more than one serial port, self clinching fasteners, rectangular, circular and custom cutouts

1. Select the port, self clinching fasteners, rectangular, circular and custom cutouts
2. Left click on the face editor,
3. Relocate the mouse pointer and left click,
4. Continue step 3 to add more serial port cutout

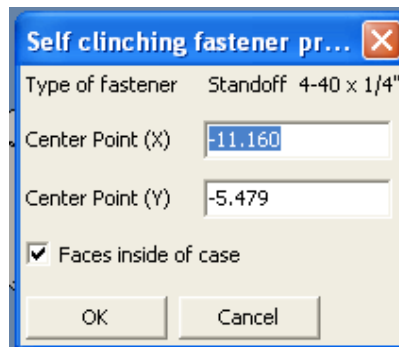
Properties

After you design a cutout or have placed standard Pems or ports you may wish to change the dimensions and their locations. To do so you should view the properties.

- a. To view the properties of the Pems:
 - i. Click Edit
 - ii. Click Properties

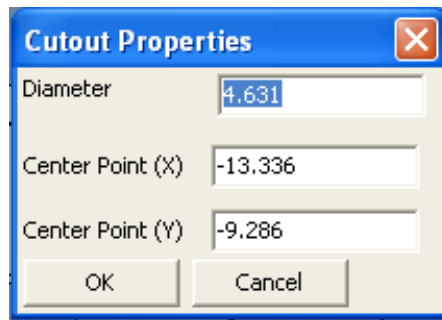


iii. Click the left-button of the mouse on the cutouts, ports or Pems. You should see a screen as shown below. The below screen example is the property pop-up box for the standoff we earlier placed. From the property box you can relocate the Standoffs 4-40 x 3/8" by changing the value for the Center Point (X) and the Center Point (Y). To face the standoff inside or outside the case use the Faces inside the case property.



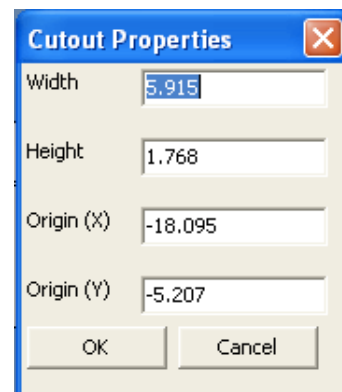
b. Circle property

To change the circle property (i.e. change the measurements and/or locations) click Cutouts, click Properties and click the circle. After you do so, you should get a screen; called as Cutout Properties, as shown below. From Cutout Properties you can change the radius and the center; shown as Center Point (X) and Center Point (Y), of the circle.



Rectangle property

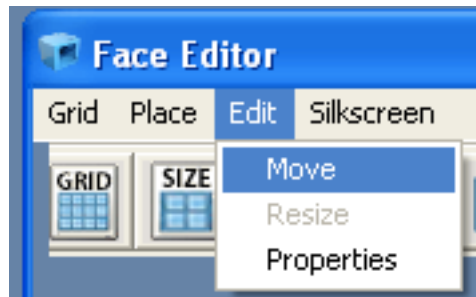
To change the rectangle property (i.e. change the measurements and/or locations) click Cutouts, click Properties and click the rectangle. After you do so, you should get a screen; called as Cutout Properties, as shown below. From Cutout Properties you can change the size of the rectangle by Width and Height property and the location of the rectangle by Origin (X) and Origin (Y) property.



Move the shapes, ports and self-clinching fasteners

You can move the shapes, ports and self-clinching fasteners from one place to another.

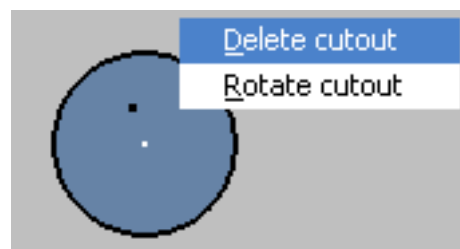
- To do so:
 - i. Click Edit
 - ii. Click Move



- iii. Click the cutouts, ports or Pems and drag it (do not release the mouse while dragging) from one location to another.

Delete the shapes, ports and self-clinching fasteners

- Right click the cutout, port or self-clinching fasteners on the face
- Click Delete cutout.



Silkscreen


Please refer our silkscreen tutorial.

Calculate the price

Protocase Designer® has an Estimate Price feature that will enable you to check the price of the enclosure while designing it. (**Note:** you must have registered Protocase Designer with Protocase Inc before the price estimate feature will function properly).

To check the price of the enclosure

- i. Click Estimate in the main menu bar then select '**Estimate Price**'.



This is your price estimate for **Quote # 595**.

To order your enclosure, simply return to Protocase Designer, and choose "Purchase" from the main menu. You may close this browser window and return to Protocase Designer at any time.

Quote # 595

Quantity to update quantity enter amount, then click "Update", and note the change in the Price Quote section below.

Quantity:

Price Quote # 595			
Quantity:	Item:	Unit:	Price in: CAD
1	u-shape(h:10 w:20 d:20)	\$220.15	\$220.15
1	Setup Fee:	\$40.00	\$40.00
		Sub-Total Price:	\$260.15

Shipping and Taxes are Extra.

Summary for Quote # 595

This will open the **Estimate** page in your browser.

On this page you can update the Quantity in the box provided, enter the amount that you desire and click the **Update** button. Note the change in the price and summary below.

PROTOCASE DESIGNER
Online Purchasing

1. **Generate Quote** | 2. Basic Info | 3. Billing Details | 4. Shipping Details | 5. Order Review | 6. Order Summary

As a first step in purchasing your order, you must generate a quote.
Enter the quantity below that you wish to order

Quantity

Quantity:

Ordering your enclosure

To order click “Purchase” from the menu in Protocase Designer. This will open a page in your web

PROTOCASE DESIGNER
Online Purchasing

1. **Generate Quote** | 2. Basic Info | 3. Billing Details | 4. Shipping Details | 5. Order Review | 6. Order Summary

Please carefully review the Quote below, and press continue when satisfied.
If you wish to change the quantities that you have entered, simply change the data and press UPDATE

Quantity

Quantity:

Quote # 597			
Price Quote # 597			
Quantity:	Item:	Unit:	Price inc: CAD
1	u-shape(h:10 w:20 d:20)	\$220.15	\$220.15
1	Setup Fee:	\$40.00	\$40.00
Sub-Total Price:			\$260.15

browser where you can update the **Quantity**.

It will generate a quote once update is clicked. You can update the **Quantity** as many times as you like. Then click the “Continue” button at the top or at the bottom of the screen to proceed to the next step in placing your order.

You will now be presented with a **Basic Information** screen, this screen should be mostly filled in with your information for you. (Name, Company, Email, Phone, and Quantity). The only thing that you must do here is enter your **Color** choice in the drop down menu. Once this is chosen you must

PROTODCASE DESIGNER
Online Purchasing

1. [Generate Quote](#) | 2. **Basic Info** | 3. [Billing Details](#) | 4. [Shipping Details](#) | 5. [Order Review](#) | 6. [Order Summary](#)

Basic Info

Please review and edit the sections below and press **Continue** at the bottom.

Name

Name:

Company:

Company Details

Email Address:

Phone:

Quantity

Quantity:

Case Color

Select a Color

Please Choose a Powdercoat Color.

click "**Continue**" to go to the **Billing Details** screen.

On the **Billing Details** screen you enter who the purchase order is being billed to. This again will be mostly filled in for you. You will have to enter your **Street Address, City, State/Province, Zip/Postal Code** and **Payment Type**.

In the **Payment Type** drop down list there are two choices.

- Credit Card Payment (Visa, Mastercard, and American Express)
- Existing Net 30 Account (Protocase offers credit to existing customers based on approved credit checks. (US & Canada: 1-866-849-3911 or UK: 020 30049981))

PROTOCOLCASE DESIGNER
Online Purchasing

1. [Generate Quote](#) | 2. [Basic Info](#) | 3. **Billing Details** | 4. [Shipping Details](#) | 5. [Order Review](#) | 6. [Order Summary](#)

Billing Details - Enter your billing details below and click the Continue button.

Name	<input type="text" value="Test Testman"/>
Email	<input type="text" value="mmusial@protocase.com"/>
Company	<input type="text" value="Protocase Inc"/>
Phone	<input type="text" value="9020000000"/>
Street Address 1	<input type="text"/>
Street Address 2	<input type="text"/>
City	<input type="text"/>
Country	<input type="text" value="Canada"/>
If you select "Other Country", please enter Country and State/Province in Area Below.	
State/Province	<input type="text" value="Select Province"/>
ZIP/Postal Code	<input type="text"/>

Payment Information

Payment Type	<input type="text" value="Please Choose a Payment Ty"/>
--------------	---

Note: A Sales Account Manager will contact you following submission of order to finalize payment.
(Online credit card payments will be added to this checkout in the near future to make the process of getting your custom enclosure even easier.)

Once you are done filling in your information on this screen, click **“Continue”** to go to the **Shipping Details** screen.

The **Shipping Details** screen is where you enter your information about where you want the enclosure shipped to. You can fill in all the information if it is being shipped to a different address than the billing address, but if it is the same you can click the check box at the top to copy over your billing information. Once filled in click the **“Continue”** button.

PROTOCOLCASE DESIGNER
Online Purchasing

1. [Generate Quote](#) | 2. [Basic Info](#) | 3. [Billing Details](#) | **4. Shipping Details** | 5. [Order Review](#) | 6. [Order Summary](#)


Shipping Details - Enter your shipping details below and click the Continue button.

Use my billing address for my shipping address

Name	Test Testman
Email	mmusial@protocase.com
Company	Protocase Inc
Phone	9020000000
Street Address 1	43 Wabana Court
Street Address 2	
City	Sydney
Country	Canada
If you select "Other Country", please type in Country and State/Province in State/Province Area Below.	
State/Province	Nova Scotia
ZIP/Postal Code	B1P 1B8

continue

You are now on the “**Order Review**” screen on this screen you carefully review your order that you are about to place with Protocase. Read the **Terms and Conditions of Sale** and click the “**I Agree the Terms and Conditions of Sale**” check box at the bottom of the page and then click continue to place order.



1. [Generate Quote](#) | 2. [Personal Info](#) | 3. [Billing Details](#) | 4. [Shipping Details](#) | 5. **Order Review** | 6. [Order Summary](#)

Order Review - Review your order details below and click the Continue button.

To complete your order:

- Carefully review your order summary on the right hand side of the page.
- Carefully review the Terms and Conditions below.
- When satisfied, click the "I Agree" checkbox, and press the Submit button at the bottom of this page.
- Your order will then be submitted to Production and Sales, then a Sales Account Manager will contact you in regards to Payment.

Details for Quote # 597

Unit Price:	\$220.15
Setup Fee:	\$40.00
Silkscreen Setup Fee:	\$0.00
Silkscreen Production Fee:	\$0.00
Total price for quantity 1:	\$260.15
Height:	10
Width:	20
Depth:	20
Number of Cutouts:	0
Number of PEMs:	0
Quantity:	1
Enclosure Type:	u-shape
Powdercoat Color:	Fire Red

Billing Details

Name:	Test Testman
Company:	Protocase Inc
Email:	mmusial@protocase.com
Phone:	9020000000
Address 1:	43 Wabana Court
Address 2:	

You are now on the **Order Summary** page. This is a web receipt of the order that was just placed, this page will also be emailed to the email address that you provided us with upon registering Protocase Designer, you can also print this page using the **"Print Page"** button at the top and bottom of the screen



Order Summary

Your order has been submitted to Protocase and is being processed.

Your Order Number is: **PD597**

A copy of this summary is being emailed to you.

Should you have any questions or concerns, please contact us at

info@protocase.com

North America : 1.866.849.3911

United Kingdom: 02030049981

Your order is complete and you may close this browser window at any time.

[Print this page](#)

Order Details

Details	
Unit Price:	\$220.15
Setup Fee:	\$40.00
Silkscreen Setup Fee:	\$0.00
Silkscreen Production Fee:	\$0.00
Total price for quantity 1:	\$260.15
Height:	10
Width:	20
Depth:	20

Contact Information

Email

Technical support: tech@protocase.com

Sales: info@protocase.com

Feedback: feedback@protocase.com

Phone

Toll free: 1-866-849-3911 (US & Canada)

Tel: 1-902-567-3335

Fax: 1-902-567-3336