

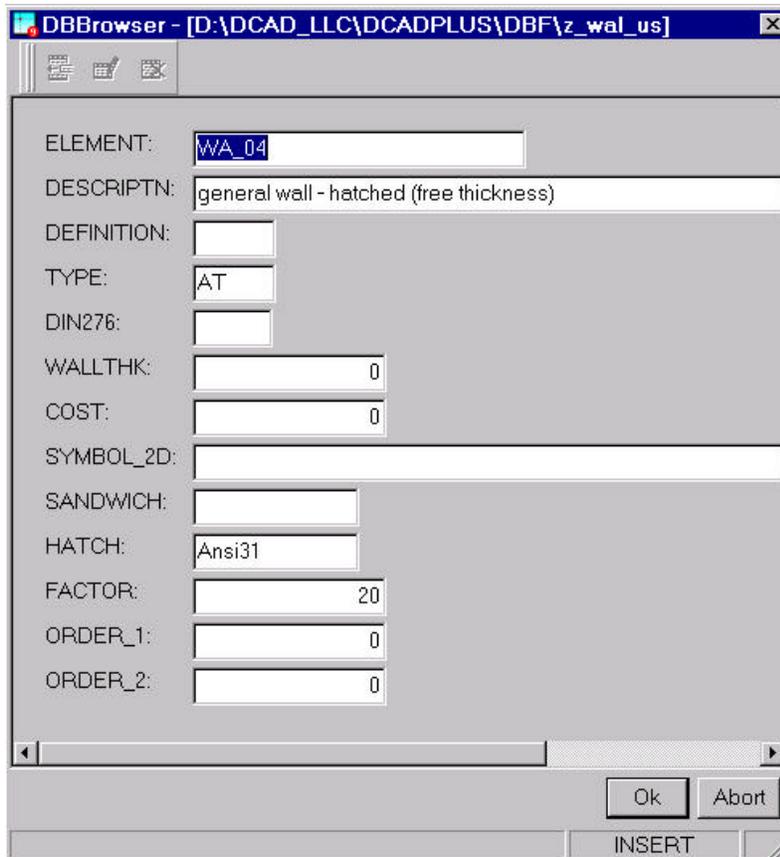
Creating a ZAC New Wall Type

There are two ways to add a new wall type to the existing ZAC database (Z_WAL_US.dbf): the simple and the complex method. The simple method uses an existing database as a model. The complex method allows you to create your own wall database.

Simple Method for Creating a ZAC New Wall Type

1. Open an existing ZAC wall database (Z_WAL_US.dbf) by using ARCHTECT, Walls, and [Backspace].
2. Highlight one of the existing free thickness entries (such as WA_04) as the basis for the new entry.
3. Click on the Add icon. The DBBrowser dialog box appears.

If the Z_WAL_US database does not load or you want to open a different one, select ARCHTECT, Walls, Order (or press [Alt] + [Backspace]), and dBase. Choose the appropriate database.

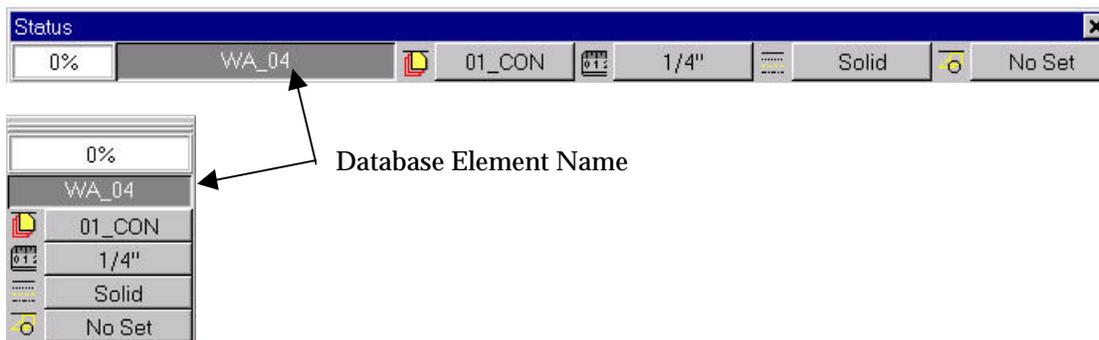


4. Use the following guidelines when inputting information into the fields of the DBBrowser dialog box:

- Element - add a new name; this is how the database identifies each wall type entry.
- Descriptn - enter a detailed description for the new wall type.
- Definition - leave the field blank if you wish to freely define the wall thickness in DataCAD Plus; enter F if you want the wall to have a fixed overall thickness.
- Type - leave as is.
- Din276 - leave as is.
- Wallthk - enter a value in meters if you defined this wall type as a fixed thickness; leave it at 0 if this is a freely definable thickness.
- Cost - leave it at 0.
- Symbol_2D - leave it blank.
- Sandwich - leave it blank.
- Hatch - enter the hatch pattern you want to use (you can enter the name of any pattern defined in the Pattern menu in the Hatch menu in DataCAD plus) if you want the walls hatched when generating a 2D construction document. Leave the field blank if you do not want the walls hatched.
- Factor - enter a hatch scale (1 - 9999) for the hatch pattern defined in the previous field.
- Order_1 - leave it set at 0.
- Order_2 - leave it set at 0.

5. Click on Ok after entering all the field values for the new database record.

You have now successfully added a new wall type into your ZAC database. Now, you can use this wall in your drawing. When you select a database component, the Element name appears next to or below the percentage indicator in the Status bar, depending on the way you set up your DataCAD Plus screen.



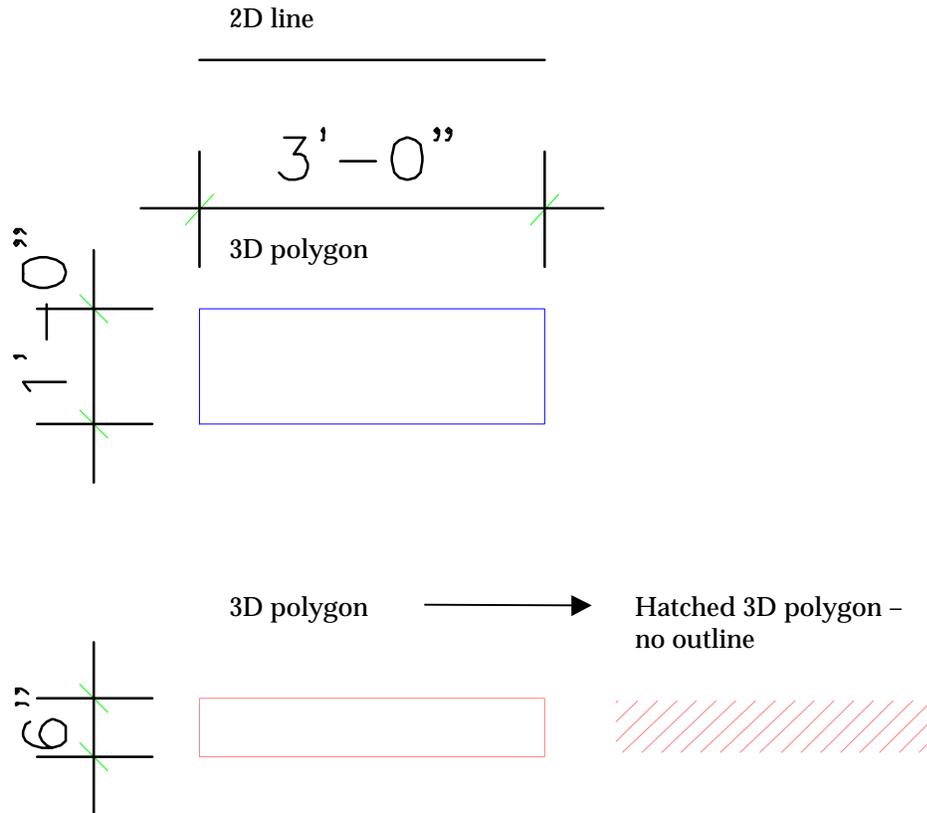
Using the ZAC Wall You Created

If you defined a fixed wall thickness, you can begin drawing walls by selecting ARCHTECT and Walls. If you created a freely definable thickness, you must select WallThk from the Walls menu and enter a value before you can draw walls.

After drawing the walls, select Gen_2D and START from the ARCHTECT menu. The walls will be drawn and hatched based on your inputs in the database for the wall type you created.

Complex Method for Creating a ZAC New Wall Type

These three components make up the complex wall type you will now define:

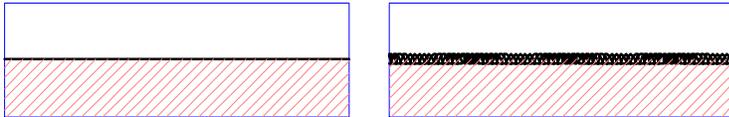


Drawing the Walls

1. Set the current input mode to Relative Cartesian (x,y) by pressing [Insert] until REL CART is displayed on the Coordinates bar.
2. Turn off (deactivate) W on the Switch bar.
3. Draw a 2Dline by picking a point on the screen, pressing [Spacebar], and entering 3'-0" for X and 0 for Y.
4. Draw a polygon by pressing [J] and selecting Polygon and RectAng. Pick a point on the screen with the left mouse button, press [Spacebar], and enter 3'-0" for X and 1'-0" for Y.
5. Draw another rectangular polygon with 3'-0" for X and 6" for Y. Hatch that polygon by pressing [H]; selecting Pattern, ANSI31, Factor; and setting the hatch scale to 20. Make sure Associat and NoOutLin are activated. Select Entity and click on the second rectangular polygon. The polygon should now be hatched.
6. Combine these separate entities into one composite drawing so that the line and smaller hatched polygon fit inside the larger one. Reposition the entities by pressing [M] and selecting Move, Drag, and Entity. Click on the entity, snap to the larger polygon, and drag the line and the hatched polygon until your drawing resembles this:



7. Make two additional copies of this composite drawing by pressing [C], indicating the distance from the original, clicking on Area, and surrounding the composite drawing with a rubberband box.
8. Vary each copy slightly. Change the Hatch factor for the pattern (see step 5) to 10 for each copy of the composite drawing.
9. Change the line type for the 2D line in the second copy by pressing [Alt] + [C] and LineType. Select an option (such as ZigZag), activate Entity, and click on the line to make it take effect.

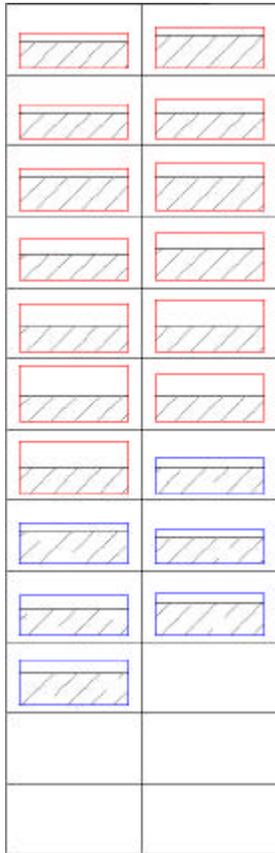


You can use any number of lines and polygons within the master polygon. You can use any of the available linetypes. The hatched polygons can contain any of the available hatch patterns.

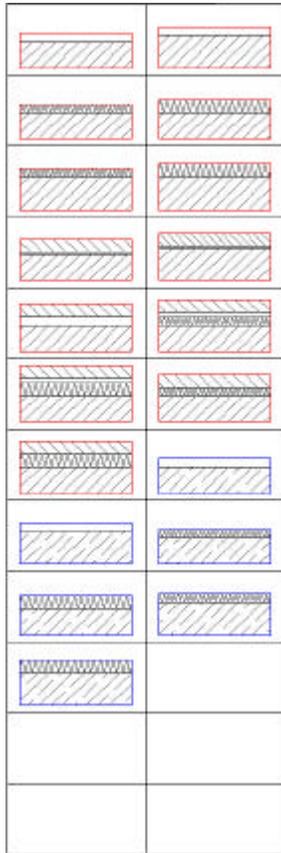
Selecting Template Directories for the New Wall Definitions

Your drawings for the three wall definitions are finished. You need to create template directories where you can save these three walls as symbols.

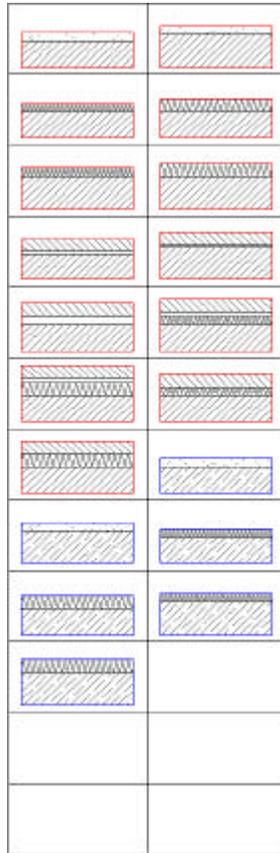
1. Press [T] for the Template menu. Choose New Path, <ROOT>, DCAD_LLC, DCADPLUS, ScrIFwrd, TPL, ScrIFwrd, ScrIFwrd, and ZAC. This establishes the directory path for the templates.
2. Click the right mouse button and select ScrIFwrd. Choose WALL_1. This establishes the template file where you will store the first drawing.
3. Select New File and click on WALL_2. This establishes the template file for the second wall you created.
4. Select New File and click on WALL_3 for the last one. This establishes the template file where DataCAD Plus will store the third drawing.



WALL_1



WALL_2



WALL_3

Saving Each Drawing as a Symbol in a Template File

Each of the template files you selected will contain one of your wall drawings as a symbol. The AutoPath option will help you save the symbols properly.

1. Press [T] to go to the Template menu, open the file WALL_1, and select SaveSymb.
2. Make sure AutoPath is activated. Enter an eight-character name for the symbol following the prompt "Enter name of the symbol file to be saved." Type the name WE_BR_01 and press [Enter].
3. Activate Area. In response to the prompt "Select first corner of area to <CREATE SYMBOL>," click near a corner of the first drawing and expand the rubberband to surround that wall. Click again when the rubberband surrounds all of your first wall but nothing else on your screen. The details of your drawing disappear, leaving a dashed-line box. The prompt "Select a reference point for symbol" appears.
4. Snap with the middle mouse button (or the [N] key) to the bottom right corner of the dashed-line box. Your wall drawing now appears in the symbols shown at the right side of your screen.
5. Right-click until the Template menu appears.
6. Select NewFile, click ScrlFwd, choose WALL_2, and select Save Symb. Follow steps 2 through 5, but use the name WE_BR_02 for the symbol file.
7. Select NewFile, click ScrlFwd, choose WALL_3, and select Save Symb. Follow steps 2 through 5, but use the name WE_BR_03 for the symbol file. Continue right-clicking until you get to the Edit menu.

The symbol path names are automatically set as follows:

Symbol 1	SYM\ZAC\WALL_1\WE_BR_01
Symbol 2	SYM\ZAC\WALL_2\WE_BR_01
Symbol 3	SYM\ZAC\WALL_3\WE_BR_01

Adding a Record of the New Wall Definition to the Database

Now that you have saved each wall as a symbol, you are ready to add a new record to the database file. This will complete your new wall definition.

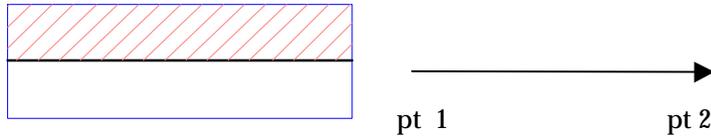
1. Follow the instructions (outlined at the beginning of this technical bulletin) for adding a simple new wall record to the database.
2. Make the following changes to the fields:
 - Element - enter WE_BR_01 (Wall External, Brickwork, 1 Foot).
 - Definition - enter F for fixed overall thickness.
 - Wallthk - enter 0.305. This is the value in meters for the 1-foot thick wall. If you are not sure of the metric equivalent for the wall, temporarily change the scale type in DataCAD Plus to meters and measure the overall thickness. (In the Utility menu, select Settings, ScaleTyp, and Meters.)
 - Symbol_2D - enter SYM\ZAC\WALL_1\WE_BR_01. This is the path where the symbol was saved with the specific symbol name. Using the subfolder WALL_1 tells ZAC to use the simplest of the three wall definition symbols as a default.
 - Hatch - leave this blank because the hatch definition is based on the symbol definition.
 - Factor for the hatch scale - no longer required; the factor is based on the symbol definition.
3. Select Ok to add the database record.

You have now successfully added a complex wall database component.

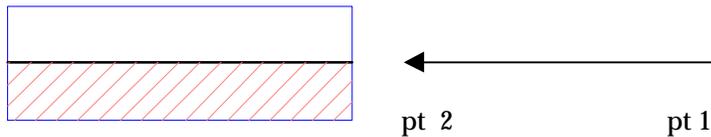
Using the Complex Wall in Your ZAC Drawing

You can now select this wall database component and use it in your drawing. If you need to make any changes to the database record, highlight the record, select the Edit icon, make the changes, and click on OK to save them.

When drawing the wall with the selected complex database component, remember the direction in which you draw the ZAC walls. Picking the first and second points of the wall sequence determines the direction in which the symbol is used for the ZAC wall. Therefore, drawing a ZAC wall in a clockwise direction using the previous symbol definition will result in this display:



Drawing the wall in a counter-clockwise direction will result in this display:



If you need to change the orientation of the wall definition after you complete your drawing, press [Alt] + [F] to go to the CleanUp menu, choose DefOuter, and click on the outer side of the wall. DataCAD Plus reorients the wall definition.

Before you start the Gen_2D process, you can use the wall definitions that contain a higher level of detail in the ARCHTECT menu to generate 2D documentation. To do this, select ARCHTECT, Gen_2D, and Detail. The Z_DETAIL database appears. Choose a medium or high level of detail and select Ok to confirm.