



DesignLink User's Guide

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Contents

Chapter 1 Concepts and Common Features

Features and Benefits.....	1-2
Concepts and Common Features.....	1-2
Command Buttons.....	1-3
Drop-down List Boxes.....	1-3
Option Buttons.....	1-3
AutoCAD Command Prompt.....	1-4
DesignLink Menu.....	1-4
DesignLink Toolbar Icons.....	1-5
DesignLink's Drawing Environment.....	1-5
AutoCAD Grips.....	1-5
Column and Row Headers.....	1-6
Sizing Columns.....	1-6
Scroll Bars.....	1-7
Using a Multi-site VISUAL Database.....	1-7

Chapter 2 Building Parts Lists

Setting Up DesignLink Parts Lists.....	2-2
Editing Column Definitions.....	2-3
Changing the Order of Column Definitions.....	2-4
Deleting Column Definitions.....	2-5
Changing Attributes.....	2-6
Creating DesignLink Parts Lists.....	2-9
Adding Parts to Your Parts Lists.....	2-9
Editing Line Items.....	2-11
Changing the Order of Line Items.....	2-12
Deleting Line Items.....	2-13
Browsing.....	2-13
Selecting Multiple Parts in the Browse Parts Dialog.....	2-15
Using Browse Filtering.....	2-15
Selecting Parts from Different Databases.....	2-17
Editing Existing Parts Lists.....	2-17

Chapter 3 DesignLink Drawing Tools

Setting Up DesignLink Title Extensions	3-2
Editing Column Definitions	3-4
Changing the Order of Column Definitions	3-4
Deleting Column Definitions	3-5
Changing Attributes	3-6
Creating DesignLink Title Extensions	3-8
Editing Title Extensions	3-9
Browsing	3-9
Using Browse Filtering.....	3-11
Selecting Parts from Different Databases	3-12
Using DesignLink Balloons	3-12
Changing Balloon Attributes	3-14
Moving Balloons in Your AutoCAD Drawings	3-15
Deleting Balloons in your AutoCAD Drawings.....	3-15
Using the Multiple Design Environment (MDE)	3-16
Using the Design Center (ADC).....	3-17

Chapter 4 Exporting DesignLink Information

Saving Design Content to a File	4-2
Emailing DesignLink Export Files	4-3
Starting VISUAL from within the AutoCAD Program	4-5
Building Masters and Work Orders from DesignLink Drawing Information.....	4-6
Adding Manufacturing Legs.....	4-10
Editing the Import from Drawing Window	4-12
Refreshing Information	4-13
Updating Information	4-13
Updating the Main Header.....	4-13
Using Exported Text.....	4-15

Chapter 5 Troubleshooting and Support

Valid VISUAL Field Tag Names.....	5-3
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Chapter Index

Chapter 1 Concepts and Common Features

This chapter includes the following information:

Topic	Page
Features and Benefits.....	1-2
Concepts and Common Features.....	1-2
Using a Multi-site VISUAL Database	1-7

Infor VISUAL DesignLink is a powerful software application that provides an effective link between your engineering CAD program and Infor VISUAL Enterprise.

DesignLink provides you with all the tools necessary to ensure that all of your engineering and manufacturing information is accurate, synchronized, and accessible.

With DesignLink you can add bills of material to your CAD drawings with ease. You can then create engineering masters, quote masters and work orders directly from that bill of material information.

Features and Benefits

DesignLink features:

- Configurable Parts List within your AutoCAD® software, with full browsing and insertion capabilities from your VISUAL database.
- Configurable drawing balloons that are linked to parts in the Parts List table.
- Configurable Title Extension within your AutoCAD software. You can build and store unique part information on your drawing and use that information to build part records in VISUAL Enterprise.
- The ability to export files containing drawing information. (Parts List table and other information from your AutoCAD software into VISUAL Enterprise.)
- The ability to execute your default email application directly from within your AutoCAD software. You can send current drawing information to colleagues or associates, without exiting your AutoCAD software.
- The ability to start your VISUAL program from within your AutoCAD software.

DesignLink benefits:

- Provides engineering and manufacturing personnel access to the same consistent and reliable source of information, within their own work environments.
- Synchronizes engineering and manufacturing information.
- Reduces redundant data entry, and error, by automatically linking information between applications.
- You can use DesignLink and VISUAL without compromising your current design and drafting practices, drawing files storage or retrieval methods.
- You can use DesignLink's export files to establish a work queue of masters and work orders that need to be created in VISUAL Enterprise.

Conventions and Symbols

The following conventions and symbols are used throughout this manual. The symbols call your attention to an event, procedure, or point of interest. These symbols make it easier for you to rapidly locate the information you need to view.

bold sans serif text This type of text indicates menu and button selections you actually press or click.

Caution

Caution: Caution messages explain the consequences of continuing with the procedure. You should seriously consider the consequences of the action before continuing.

Concepts and Common Features

This section contains information on the general principles and common features of the DesignLink user interface.

Command Buttons

Use a command button to carry out the command you want. The function that each command button performs, appears on the face of the button.

For example, the browse button is marked.



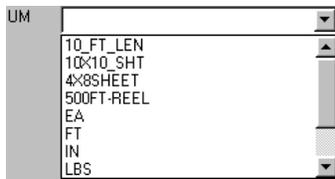
You may find that, depending on the what you are using, a particular command button may have a dotted line around it, indicating that the button is “live.”



Pressing the ENTER key has the same affect as clicking **OK**.

Drop-down List Boxes

Drop-down list boxes contain lists from which you select only one item.

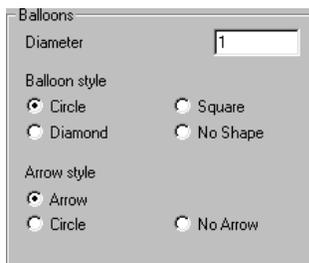


To use a drop-down list box, click the drop-down arrow on the right and click on the item you want.

The item you selected appears in the drop-down list box.

Option Buttons

Option buttons, or Radio Buttons as they are sometimes known, are small round buttons that you can click on to select various options. You can only select **ONE** option button at a time; clicking on another option button automatically deselects the one you originally selected. DesignLink uses option buttons when only one selection at a time is available.



AutoCAD Command Prompt

DesignLink commands can be executed from the AutoCAD Command Prompt.

In the Command Prompt window type:

vmbom to execute the Insert/Edit Parts List command

vmbomsetup to execute the Parts List Setup Command

vmballoon to execute the Balloons command

vmtitle to execute the Insert/Edit Title Extension command

vmtitlesetup to execute the Title Setup Extension command

vmexport to execute the Create Export File command

vmSEND to execute the Send File command

vmrun to execute the Run VISUAL command

Note: You can create shortcuts for the DesignLink AutoCAD commands by modifying your ACAD.PGP file. For more information on modifying your ACAD.PGP file, refer to your AutoCAD documentation.

DesignLink Menu

The DesignLink menu contains all of the functions available in DesignLink—Inset/Edit Parts List, Parts List Setup, Balloons, Insert/Edit Title Extension, Title Extension Setup, Create Export File, Send File and Run VISUAL.



To select an item from the DesignLink menu, click on the DesignLink menu and the menu options drop-down. Click on the option you want.

Menu selections in this manual are given as:

“From the DesignLink menu, select **Balloons**.”

DesignLink Toolbar Icons

On the DesignLink toolbar, there are eight shortcut icons that provide you with “single click” access to the various functions of DesignLink.



Use the DesignLink **Parts List** icon to open the PartsList Maintenance table.



Use the DesignLink **Parts List Setup** icon to open the Parts List Setup Maintenance window.



Use the DesignLink **Balloons** icon to open the Balloons Maintenance window.



Use the DesignLink **Title Extension** icon to open the Title Extension Maintenance window.



Use the DesignLink **Title Extension Setup** icon to open the Title Extension Setup Maintenance window.



Use the DesignLink **Export File** icon to open the Export File window.



Use the DesignLink **Send File** icon to email DesignLink Bill of Material files using your default email program.



Use the **Run VISUAL** icon to start VISUAL from within your AutoCAD software.

DesignLink’s Drawing Environment

DesignLink inserts your Parts Lists, Title Extension and Drawing Balloons into the current drawing environment (Paper Space or Model). These objects have the properties of the current layer on which you insert them. If you want to change either the color, layer, linetype or linetype scale of the DesignLink objects, you must use AutoCAD **CHPROP** or **DDCHPROP** commands. You cannot change the thickness or linewidth of any DesignLink objects in your AutoCAD drawing.

Caution: Using the Edit/Copy commands in your AutoCAD software, you can copy and paste your DesignLink Parts List, Title Extension, and Balloon objects to different locations in your drawing. The objects you copied and pasted are no longer linked to DesignLink. Therefore DesignLink cannot automatically update these copies when you make changes to the Parts List or Title Extension.

You can insert multiple DesignLink Balloons which you can link to your Parts List by using the VMBalloon command multiple times. Each of the balloons you insert into your drawing using the VMBalloon command are automatically updated when you make changes to your Parts List.

AutoCAD Grips

DesignLink Parts Lists, Title Extensions, and Balloon objects have AutoCAD grips.

To use an object's grip, click anywhere on the appropriate object to display the object's grips. Click on the grip you want to activate and move the grip (and the object) to a new location on your drawing.

For more information on AutoCAD grips, refer to your AutoCAD documentation.

Tables

Entering information in DesignLink involves the use of data tables, this allows DesignLink to present your information in a clear, organized table.

You can manipulate all of the tables in DesignLink in the same way.

Column and Row Headers

Column headers are the small gray boxes at the top of each column, they contain the name of the column.

ITEM	Part ID	Description	Qty	UM
1	B01234	TUBING, 1/4 O.D., X .035 WALL	1.0000	EA
2	C09867	NUT, 45 DEG FLARE, 1/4 TUBE, S.S.	1.0000	EA
3	D05678	SLEEVE, 45 DEG FLARE, 1/4 TUBE, S.S.	1.0000	EA

Row headers are the small gray boxes to the left of each row. Clicking on the row header selects that row.

The row you select appears highlighted.

ITEM	Part ID	Description	Qty	UM
1	B01234	TUBING, 1/4 O.D., X .035 WALL	1.0000	EA
2	C09867	NUT, 45 DEG FLARE, 1/4 TUBE, S.S.	1.0000	EA
3	D05678	SLEEVE, 45 DEG FLARE, 1/4 TUBE, S.S.	1.0000	EA

If you want to select several consecutive rows in a table, press the SHIFT key while you click your selections.

If you want to select several non consecutive rows in a table, press the CTRL key while you click on your selections.

For more information, refer to the "Building Parts Lists" chapter.

Sizing Columns

Because rows can contain more information than will fit in a column, you can size a column to view more of its contents.

Point to the right side of the column header you want to resize. The cursor changes to a double arrow shaped pointer.

Part ID	Description
B01234	TUBING, 1

Drag the side of the selected column header until the column is the size you want. Sizing a column in this manner affects ONLY the way the column appears in your DesignLink dialog window. Any objects you have placed on your AutoCAD drawing are not affected when you change the size of table columns.

Move Buttons

When you want to move a row to a different location in your table, use the **Up** and **Down** move buttons to place the information you want in the location within the table you want.



Scroll Bars

If your table has more columns than fit in the window, a horizontal scroll bar appears at the bottom of the table.



If your table has more rows than fit in the window, a vertical scroll bar appears at the right side of the window.

Use the scroll bars to move the table to the information you want to view.

Note: *In order for DesignLink to populate your table quickly, DesignLink only populates your table with enough information for the current window. As you use the scroll bar to access more information, DesignLink continues to populate your table until your information appears in the table. (Up to a maximum of 1000 parts.)*

Using a Multi-site VISUAL Database

If you use a multi-site database, your default site is the only site available to use in DesignLink. If you do not have a default site, then the first viewable site found in your VISUAL database is used. If you do not have any viewable sites, then the first allowable site found in the VISUAL database is used.

To use a different site in DesignLink, you must log in as a user whose default site is the site you want to use. Or, you must change your default site in VISUAL, and then log into DesignLink.

This chapter includes the following information:

Topic	Page
Setting Up DesignLink Parts Lists	2-2
Creating DesignLink Parts Lists.....	2-9

Before you begin to work with the DesignLink to build a parts list, you may find it useful to understand how your company currently prepares and uses its VISUAL bills of manufacture.

A well prepared and complete DesignLink Parts List provides you with a complete list of materials to import into your VISUAL program.

Setting Up DesignLink Parts Lists

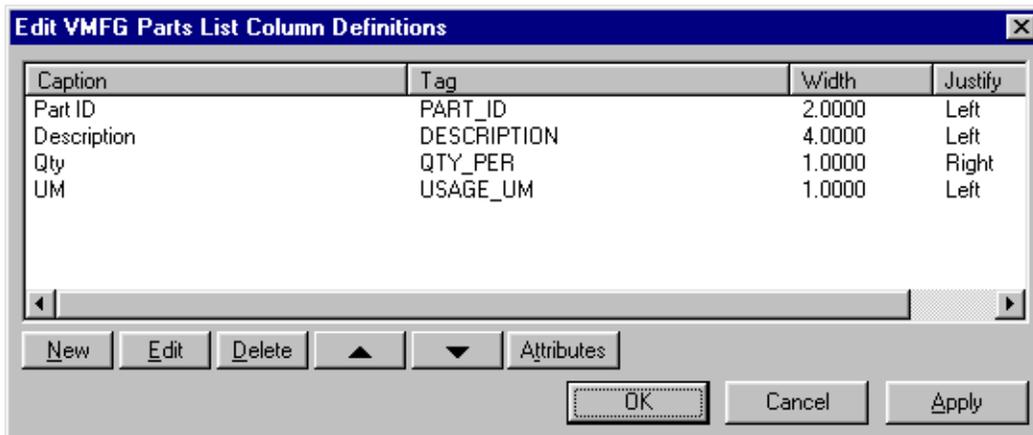
After you have decided what information fields you want to include in your drawing parts list, you must include those fields as column definitions in DesignLink.

Note: Because the DesignLink Parts List is a custom object within the drawing, the DesignLink Parts List Setup is the only way you can change or modify the attributes and characteristics of the object within your drawing.



1. Click the DesignLink **Parts List Setup** icon, or from the DesignLink menu select **Parts List Setup**.

The Edit VMFG Parts List Column Definitions dialog is displayed.



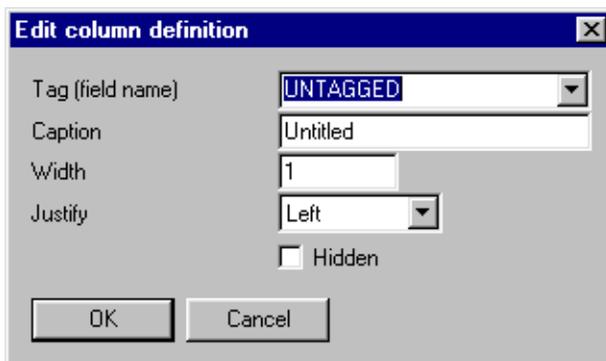
A list of currently defined fields is displayed. If you have not previously defined any columns, only DesignLink's four default columns are displayed: Part ID, Description, Qty and UM.

Your DesignLink Parts List contains the data that is displayed in the fields of the material and leg header cards in the Manufacturing window.

You can define up to a maximum of 16 columns.

2. Click **New**.

The Edit Column Definitions dialog is displayed.



3. Specify this information into the dialog:

Tag (field name) – This field contains the actual name of the data field. This is the name that DesignLink assigns to this field when you export your data. Select a valid VISUAL tag from the drop-down list or specify a tag name of your own.

You may want to use tag and caption names that have meaning to your company even if VISUAL will not assign the information to a field in the Manufacturing window.

Note: *Follow your VISUAL database field naming protocol. VISUAL can ONLY import valid Tag IDs successfully.*

Caption – This field contains the name you want to give this field. Because this name is displayed in the Parts List table on your drawing, choose a name that most suits what this field represents.

Width – This field contains the width you want this column to appear on your drawing. DesignLink uses Imperial (inches) units for the DesignLink Parts List table, regardless of your drawing units.

Note: *The Width value is an absolute value, unless you change the overall scaling factor to a value not equal to one. For more information on Scaling Factors, refer to “Changing Attributes” later in this chapter.*

If the length of the data contained in each column exceeds the specified column width, DesignLink automatically wraps the line until the appropriate information is displayed in a single column.

Justify – This field contains the text position within the column. You can select either Left, Center or Right.

Hidden – This check box indicates the display status of the column in your drawing. DesignLink automatically clears the Hidden check box allowing the column to appear in your drawing. If you do not want the column to appear in your drawing, select the Hidden check box.

DesignLink exports any data you specify in a hidden column.

If you want to conserve drawing space and hide columns, and still specify data in those columns, DesignLink exports your hidden column data even though they are not displayed in your drawing.

4. Click **OK**.

The Edit Column Definitions dialog closes and DesignLink adds the new Column Definition to the Parts List Column Definitions List.

5. When you have finished adding your new column definitions, click **OK**.

The Edit VMFG Parts List Column Definitions dialog closes. If you have previously placed this Parts List into your drawing, the changes are displayed in your drawing. If you have NOT previously placed your Parts List into your AutoCAD® drawing, DesignLink prompts you for an insertion point for the drawing object.

Editing Column Definitions

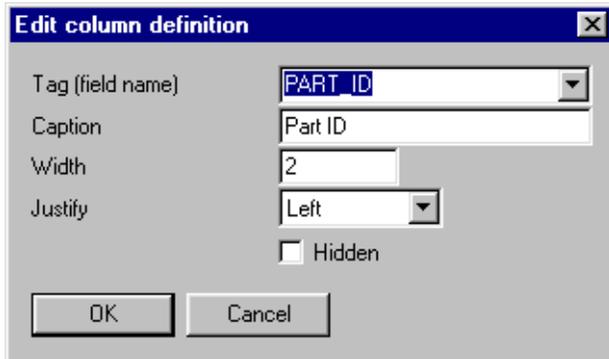
From time to time you may need to change a column definition. For example, if you want the text in a column to be Center Justified instead of Left Justified.

1. From the Edit VMFG Parts List Column Definitions dialog, click on the row header for the column definition you want to edit.

The selected row is highlighted.

2. Click **Edit**.

The Edit Column Definition dialog is displayed.



3. Make any appropriate changes you want.

Remember, VISUAL can ONLY import valid Tag IDs successfully.

4. Click **OK**.

The Edit Column Definitions dialog closes and the changes you made are displayed in the Edit VMFG Parts List Column Definitions dialog.

Changing the Order of Column Definitions

You can change the order in which the columns are displayed in your drawing to suit the drawing conventions your company uses.

Note: *Descending line items in DesignLink's Edit VMFG Column Definitions window are displayed left to right in your drawing Parts List table.*

To change the order of a line item in your Parts List Setup:

1. Click the row header for the row you want to move.

The row is highlighted.

2. Click the **Move Up** button to move the selected column heading up one line in your Parts List Setup. Click the **Move Down** button to move the selected column heading down one line in your Parts List Setup. Remember you are defining in a vertical setup, what is displayed horizontally on your drawing.

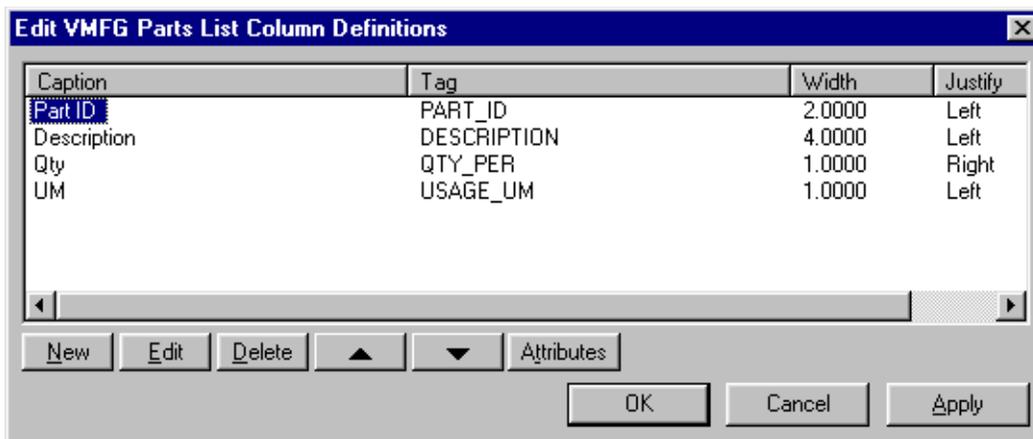
Deleting Column Definitions

Caution: You CANNOT recover deleted line items. Before you click Delete, make sure that removal is the action you want to take.

If you want to delete a column definition:

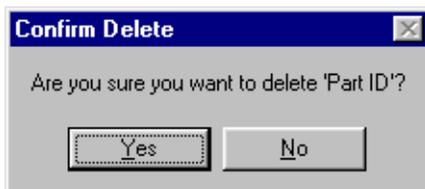
1. Click the Caption Name for the column definition you want to delete.

The selected name is highlighted.



2. Click **Delete**.

The Confirm Delete dialog is displayed.



3. To confirm the column deletion, click **Yes**.

DesignLink removes the selected column definition from the list of column definitions. DesignLink deletes any data you have previously specified in this column.

To cancel the deletion of this column, click **No**.

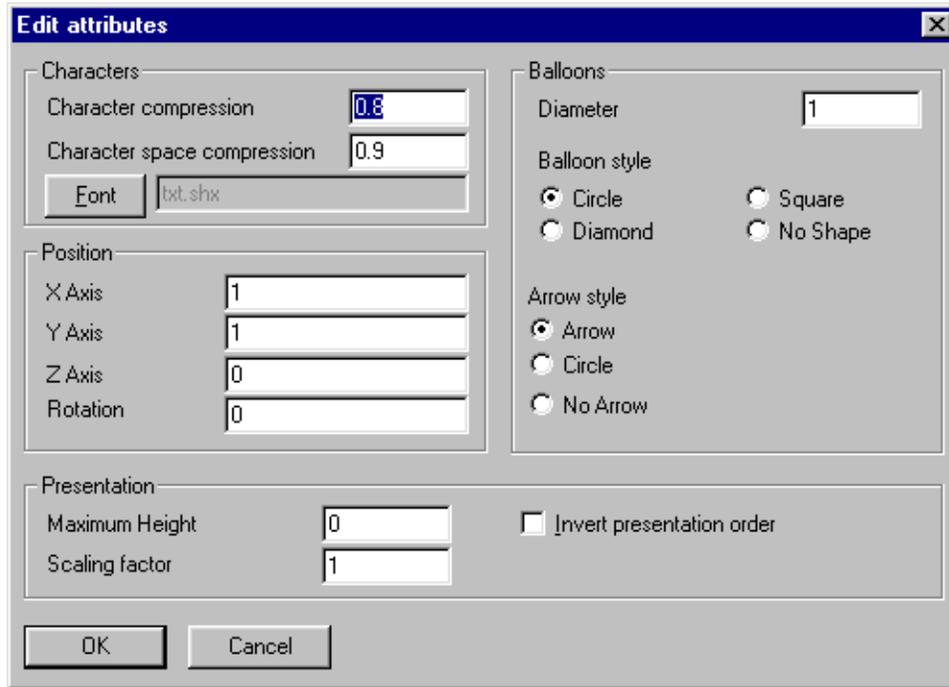
The Confirm Delete dialog closes.

Changing Attributes

DesignLink Parts Lists have several user definable attributes that change the appearance of your Parts List in your drawing.

1. From the Edit VMFG Parts List Column Definitions dialog, click **Attributes**.

The Edit Attributes window is displayed.



2. Make any appropriate changes you want.
3. In the Characters section, you can change the following:

Character Compression – This field contains the relative scaling factor by which you want to horizontally scale all of your text characters.

Your text characters remain the same height regardless of the character compression you assign them.

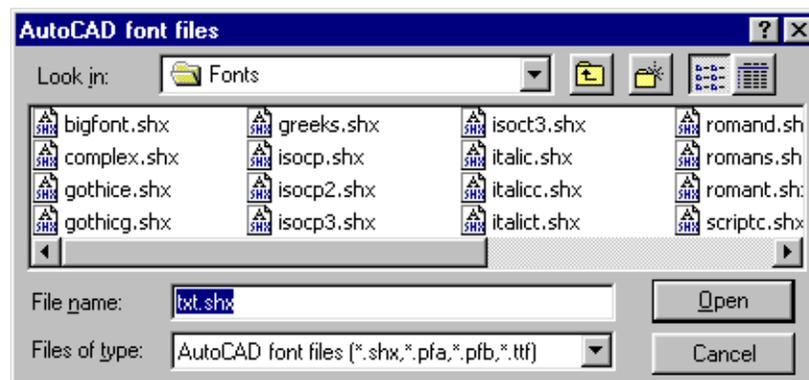
Character Space Compression – This field contains the relative scaling factor by which you want to horizontally scale ONLY the space between your text characters.

Your characters remain the same height and size, regardless of the character space compression you assign them.

Changing Fonts – If you want your Parts List's text to display as a different font style:

- a. From the Edit Attributes window, click **Font**.

The AutoCAD Font Files search window is displayed.



- b. Navigate to, and select the font style you want to use.
- c. Click **Open**.

The AutoCAD Font Files search window closes.

In the Position section, you can change the following:

Because AutoCAD drawings can be two dimensional or three dimensional, DesignLink can place your Parts List on your drawing, in a specific location, based on the three UCS (User Coordinate System) or WCS (World Coordinate System) coordinates—X, Y, and Z.

X Axis – This field contains the X location of your Parts List on your drawing, side to side on your screen. DesignLink automatically changes the X Axis figure when you manually move the X location of your Parts List, within your drawing.

Y Axis – This field contains the Y location of your Parts List on your drawing, up and down on your screen. DesignLink automatically changes the Y Axis figure when you manually move the Y location of your Parts List, within your drawing.

Z Axis – The Z Axis contains the Z location of your Parts List on your drawing, in and out on your screen. This dimension is **ONLY** valid on three dimensional drawings. DesignLink automatically changes the Z Axis figure when you manually move the Z location of your Parts List, within your drawing.

If you want to place, or move your Parts List to a specific location on your drawing, specify the location coordinates you want in the appropriate Axis fields.

Note: You can also change the location of your Parts List table within your AutoCAD drawing workspace by capturing and activating one of the object's grips.

Rotation – This field contains the rotation angle of the Parts List.

Unless you have set the AutoCAD setting for Angles in Drawing Units to clockwise, the Rotation angle is measured in a counterclockwise direction.

If you want to rotate your Parts List to a specific orientation on your drawing, specify the appropriate rotation angle in the Rotation field.

The rotation angle is useful in displaying larger Parts Lists along the longer edge of the drawing and paper.

4. In the Balloons section, you can change the following:

Diameter – This field contains the diameter dimension of any DesignLink balloons you place in your drawing.

If the Balloon Style is NOT a circle, the value you specify is the theoretical diameter that DesignLink uses to construct other Balloon Styles.

In general, Balloon diameter works best when set between 0.8 and 1 times the presentation scaling factor.

Balloon Style – You can select the shape of the balloons that DesignLink places in your drawing by selecting a Balloon Style option.

If you want to display a circle shaped balloon in your drawing, select the **Circle** option.

If you want to display a diamond shaped balloon in your drawing, select the **Diamond** option.

If you want to display a square shaped balloon in your drawing, select the **Square** option.

If you do not want a balloon displayed in your drawing, select the **No Shape** option.

Arrow Style – You can select the shape of the arrows that DesignLink places in your drawing by selecting an Arrow Style option.

If you want to display an arrow shaped arrow in your drawing, select the **Arrow** option.

If you want to display a circle shaped arrow in your drawing, select the **Circle** option.

If you do not want an arrow displayed in your drawing, select the **No Arrow** option.

5. In the Presentation section, you can change the following:

Maximum Height – This field contains the maximum height you want the Parts List table to appear on your drawing. If the Parts List is too long to fit in the height parameter you specify, DesignLink creates a second table (also known as multiple-column bill of materials), automatically placing it next to, and to the right of, the first. DesignLink continues to create additional table sets until all of your parts are listed on the drawing. A nominal space is displayed between each table.

For example, if you specify a value of 2, DesignLink places parts in your Parts List table until the table is two units in height. DesignLink then starts a second table and continues adding parts until the second table is two units in height. DesignLink continues to add tables until all of your parts appear in your drawing Parts List table. If your drawing units are in inches and you have set the scaling factor to one, a Maximum Height value of two causes your Parts List to appear on your drawing no more than two inches high.

A value of zero (0) is automatically entered for the maximum height presentation.

When you set the maximum height value to zero, the Line # column is displayed as a single column regardless of the quantity of lines in your parts list. You may specify any value between 0 and 99999.99.

You must specify the Maximum Height for your parts table in English units, regardless of your drawing units.

Scaling Factor – When you place this Parts List on your drawing, DesignLink scales your complete Parts List Table as one object, by the factor you specify here. If you want your Parts List to appear larger, specify a larger scaling factor.

Note: You can ONLY scale your DesignLink Parts List table from the Edit Attributes window. You

CANNOT scale your DesignLink Parts List table as an AutoCAD object. (Using AutoCAD Scale or Stretch commands.)

Because your DesignLink Parts List is an object defined in English units, Metric drawings may require scaling factors in excess of 25.

Invert Presentation Order – DesignLink automatically populates your parts table from top to bottom, with the column headers at the top. The Invert presentation order check box is cleared.

If you want to invert your parts list (parts listed bottom to top with the column headers at the bottom), select the **Invert presentation order** check box.

6. When you have finished making the changes you want, click **OK**.

The Edit Attributes window closes.

Creating DesignLink Parts Lists

The first step in creating a DesignLink bill of manufacture is to build a list of the parts you want to use.

You can add parts to new or existing list of materials.

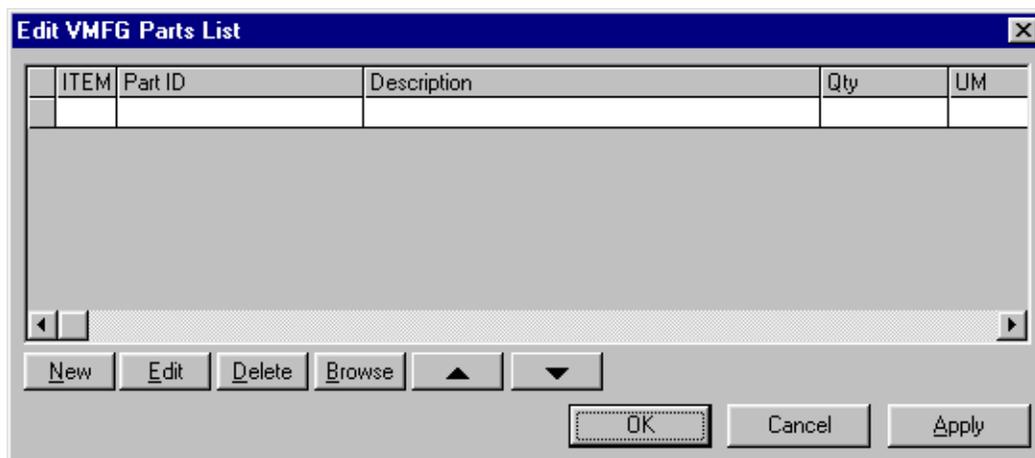
Adding Parts to Your Parts Lists

To add parts to your designlink parts lists:



1. Click the DesignLink **Parts List** icon on the toolbar, or from the DesignLink menu, select **Insert/Edit Parts List**.

The Edit VMFG Parts List window is displayed.

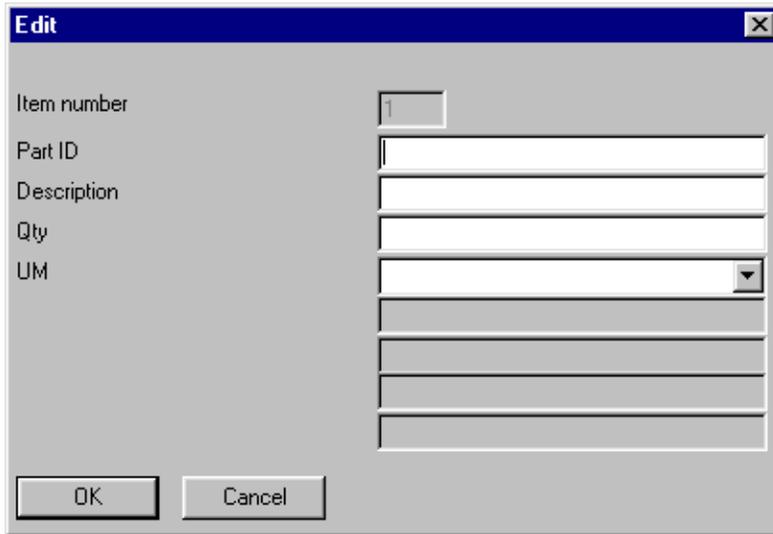


Note: The columns that are displayed in the Edit VMFG Parts List window, include any of the Column Definitions you added during your Parts List setup.

For reference purposes only, the four default columns are shown in these examples.

2. Click **New**.

The Edit New Line Item dialog is displayed.



The screenshot shows a dialog box titled "Edit" with a close button (X) in the top right corner. The dialog contains several input fields and a drop-down menu. The fields are labeled as follows:

- Item number: A text box containing the number "1".
- Part ID: A text box.
- Description: A text box.
- Qty: A text box.
- UM: A drop-down menu.

At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

In the item number field, the next sequential number is inserted. In the example, the line item is number one because it is the first line in the parts list.

3. Specify the appropriate information for this part.

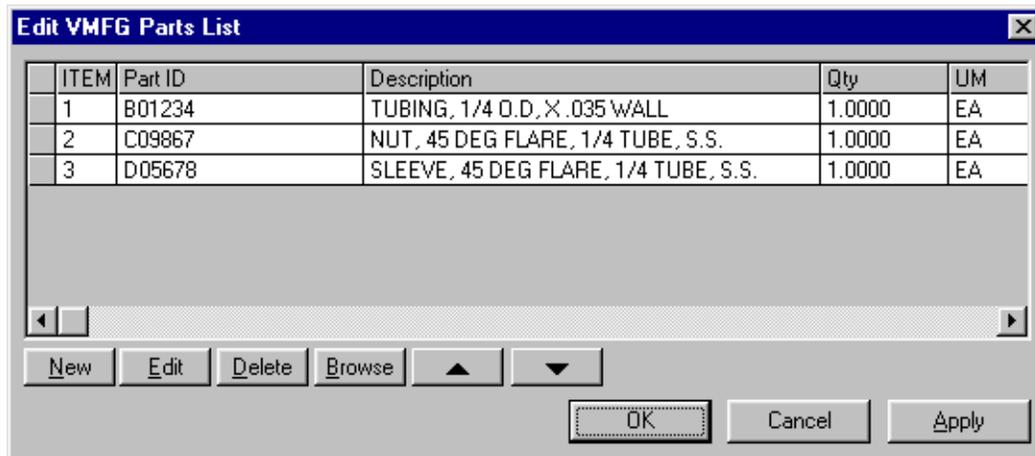
Drop-down lists are displayed for captions whose tags are:

- USAGE_UOM
- PRODUCT_CODE
- COMMODITY_CODE
- VENDOR_ID
- WAREHOUSE_ID

You can either leave these fields blank or select data from the drop-down list, but you cannot manually specify new data for these fields.

4. Click **OK**.
-

The Edit New Line Item dialog closes and the information you added is displayed in the Edit VMFG Parts List window.



- When you have finished adding parts to your parts list, click **OK**.

The Edit VMFG Parts List window closes.

- Select an insertion point on your drawing where you want to insert your parts list table.

For more information on inserting objects into AutoCAD drawings, refer to your AutoCAD documentation.

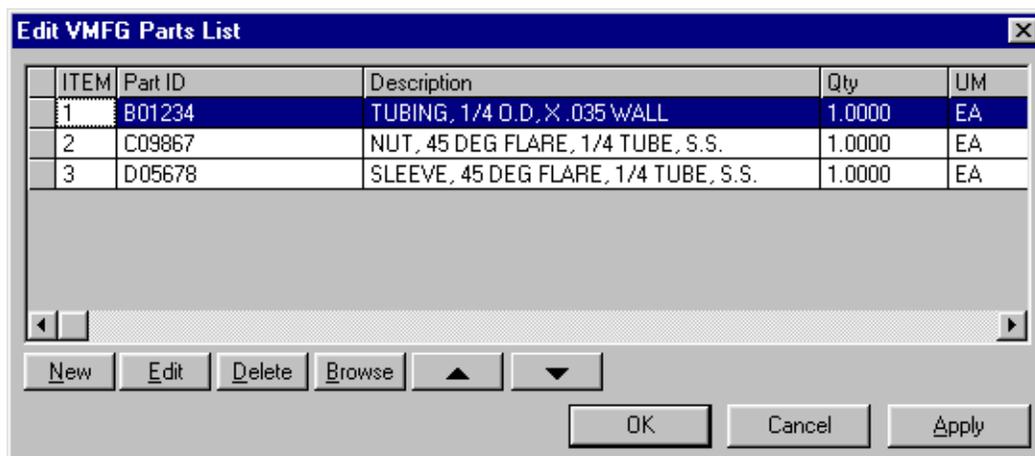
Editing Line Items

You can edit your parts list by changing individual line items or by adding new line items.

To edit a line item:

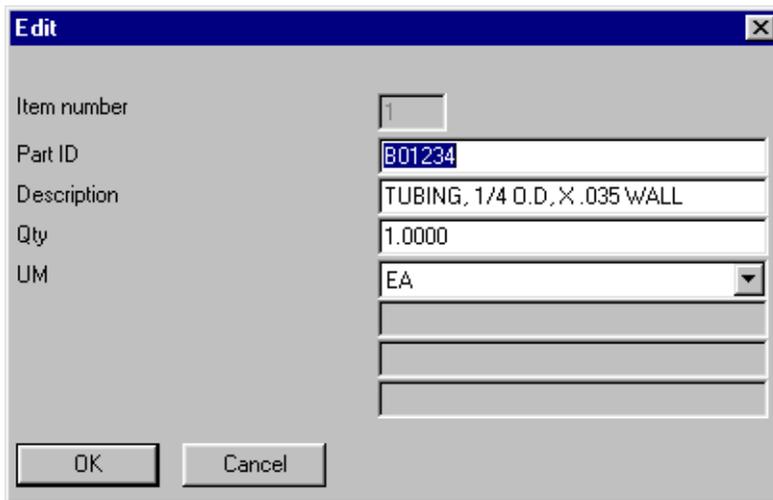
- Click the row header for the line item you want to edit.

The selected row is highlighted.



2. Click **Edit**.

The Edit Line Item dialog is displayed.



The screenshot shows a dialog box titled "Edit" with a close button in the top right corner. The dialog contains the following fields and values:

Item number	1
Part ID	B01234
Description	TUBING, 1/4 O.D., X .035 WALL
Qty	1.0000
UM	EA

At the bottom of the dialog are two buttons: "OK" and "Cancel".

3. Make any appropriate changes you want.
4. Click **OK**.

The Edit Line Item dialog closes and your changes are displayed in the Edit VMFG Parts List window.

Changing the Order of Line Items

Sometimes you may want to arrange the items in your parts list in a specific order. For example, you may want to list your parts in alphabetical order or group similar parts together.

You can change the order of the line items in your parts list, and thereby change the line item's Line Number. (And the line items balloon number) This is especially useful when you assign balloon numbers in your drawing.

To change the order of a line item in your parts list:

1. Click the row header for the row you want to move.

The row is highlighted.

2. Click the **Move Down** button to move the selected line item down one line in your parts list. Click the **Move Up** button to move the selected line item up one line in your parts list.



As you move a line item up or down, the other line items automatically renumber.

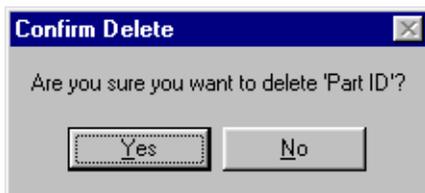
Deleting Line Items

Caution: You CANNOT recover deleted line items. Before you click Delete, make sure that removal is the action you want to take. DesignLink does NOT request a delete confirmation.

If you want to delete an individual line item:

1. Click the row header for the line item you want to delete. The selected row is highlighted.
2. Click **Delete**.

A Confirm Delete prompt is displayed.



3. If you want to delete the part you selected, click **Yes**.

If you want to confirm the deletion all of the parts you selected, click **Yes to All**.

If you do not want to delete the selected part, click **No**.

If you do not want to delete all of the selected parts, select **No to All**.

DesignLink removes the selected line items from your Parts List. DesignLink automatically renumbers the remaining line items.

If you want to cancel the deletion of any parts, click **Cancel**.

The Confirm Delete prompt closes.

Browsing

You can browse your VISUAL database from within DesignLink. You must have login privileges to access your VISUAL database.

Note: When you browse the VISUAL database from within your AutoCAD software, you are NOT logged into your VISUAL system, you are simply browsing the database.

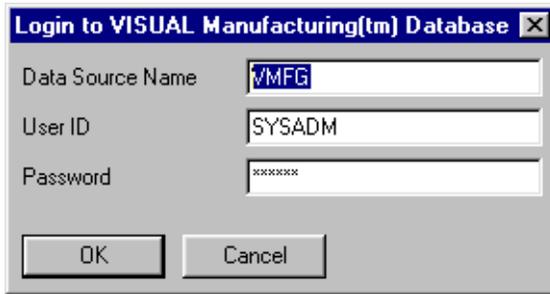
If you do not have access to your VISUAL database, you must contact your system administrator for access privileges.

Use the Browse button to select parts from your VISUAL database.

1. Click **Browse**.



A VISUAL Database Login dialog is displayed.



The dialog box titled "Login to VISUAL Manufacturing(tm) Database" contains three input fields: "Data Source Name" with the value "/MFG", "User ID" with the value "SYSADM", and "Password" with a masked value "*****". There are "OK" and "Cancel" buttons at the bottom.

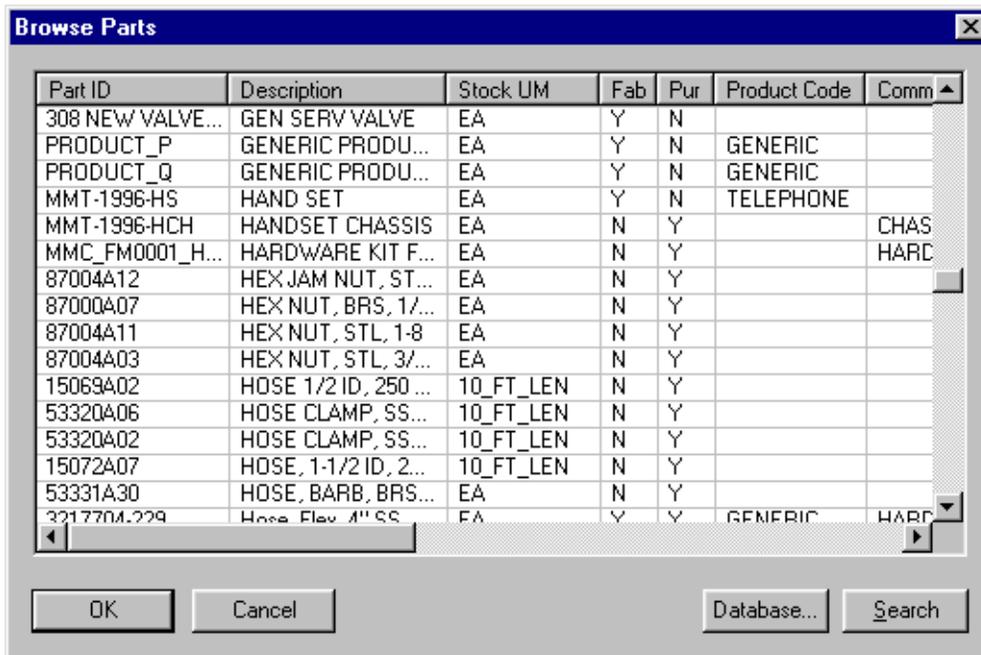
Note: Remember, you must specify your Data Source name in the Database Source Name field — your Data Source name must be different than your Database name.

2. Log into VISUAL database. For more information on logging into VISUAL database, refer to your VISUAL documentation or consult your system administrator.

The Browse Parts dialog is displayed, populated with your VISUAL parts information.

The data that is displayed in your Parts Browse dialog is automatically sorted alphanumerically, by Part ID. To sort Part IDs in descending order, click the Part ID column header.

To sort your data on another column, click the appropriate column header. Click the column header again to reverse the sort order of that column.



The "Browse Parts" dialog box displays a table with the following columns: Part ID, Description, Stock UM, Fab, Pur, Product Code, and Comm. The table contains 20 rows of data. The first row is highlighted.

Part ID	Description	Stock UM	Fab	Pur	Product Code	Comm
308 NEW VALVE...	GEN SERV VALVE	EA	Y	N		
PRODUCT_P	GENERIC PRODU...	EA	Y	N	GENERIC	
PRODUCT_Q	GENERIC PRODU...	EA	Y	N	GENERIC	
MMT-1996-HS	HAND SET	EA	Y	N	TELEPHONE	
MMT-1996-HCH	HANDSET CHASSIS	EA	N	Y		CHAS
MMC_FM0001_H...	HARDWARE KIT F...	EA	N	Y		HARC
87004A12	HEX JAM NUT, ST...	EA	N	Y		
87000A07	HEX NUT, BRS, 1/...	EA	N	Y		
87004A11	HEX NUT, STL, 1-8	EA	N	Y		
87004A03	HEX NUT, STL, 3/...	EA	N	Y		
15069A02	HOSE 1/2 ID, 250 ...	10_FT_LEN	N	Y		
53320A06	HOSE CLAMP, SS...	10_FT_LEN	N	Y		
53320A02	HOSE CLAMP, SS...	10_FT_LEN	N	Y		
15072A07	HOSE, 1-1/2 ID, 2...	10_FT_LEN	N	Y		
53331A30	HOSE, BARB, BRS...	EA	N	Y		
3217704.229	Hose, Flex, 4" SS	EA	Y	Y	GENERIC	HARC

Buttons at the bottom include "OK", "Cancel", "Database...", and "Search".

3. Click on the row header for the part you want to use.

The selected row is highlighted.

4. Click **OK**.

The Browse Parts dialog closes, and the selected part is displayed in the Edit VMFG Parts List window.

Selecting Multiple Parts in the Browse Parts Dialog

To select multiple parts:

1. In the Browse Parts dialog, click on the part you want to use, and hold the mouse button down, similar to drag and drop.

The selected row is highlighted.

2. Drag the cursor up or down to include the other rows you want.

All of the rows you select are highlighted.

Note: You can also use the *SHIFT* and *CTRL* keys to aid in your parts selection process.

For more information on using the *SHIFT* and *CTRL* keys for selecting, consult your VISUAL documentation.

3. When you have selected all the parts you want, release the mouse button.

4. Click **OK**.

The Browse Parts dialog closes and the selected parts are displayed in the Edit VMFG Bill of Parts List window.

Using Browse Filtering

If your VISUAL parts database contains several hundreds or even thousands of parts, you may find DesignLink's search function very helpful when locating specific parts.

To use browse filtering:

1. In the Browse Parts dialog, click **Search**.

The Query dialog is displayed.

The Query dialog box is shown with the following fields and options:

- Part ID
- Description
- Stock UM
- Product Code
- Commodity Code
- Manufacturer's Name
- Manufacturer's Part ID
- Drawing ID
- Pref Vendor ID
- Primary Warehouse ID
- Quantity On Hand
- Fabricated
- Purchased
- Stocked
- Detail Only
- Tool Or Fixture

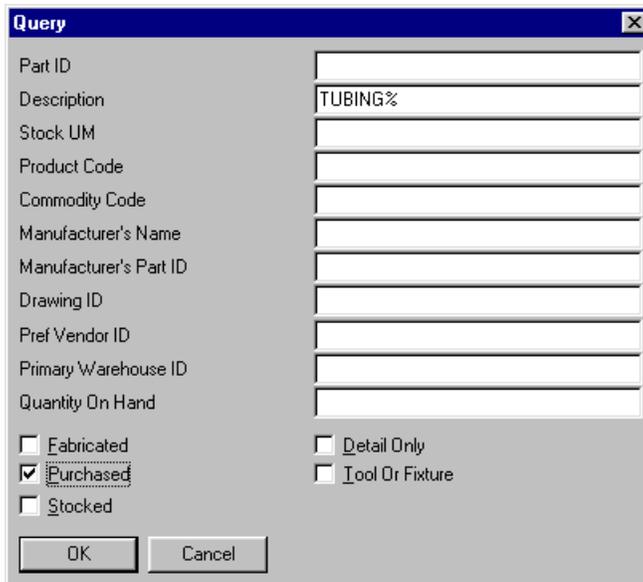
Buttons: OK, Cancel

2. Specify the appropriate information for the parts for which you want to search.

You can use the percent % character to specify “Wildcard” characters. For example, if you want to search for all the parts that have a description that begins with **TU**, enter **TU%**. DesignLink searches your VISUAL database, and returns **ONLY** the parts whose description begins with **TU**.

DesignLink searches your VISUAL database for the information you specified in each filter field. For example, if you want to search for all purchased parts that have a description that begins with **TUBING**, specify **TUBING%** in the Description field, select the Purchased check box and clear the Fabricated check box. DesignLink searches your VISUAL database, and returns **ONLY** purchased parts whose descriptions begin with **TUBING**, regardless of the length of the description.

DesignLink queries are case sensitive.



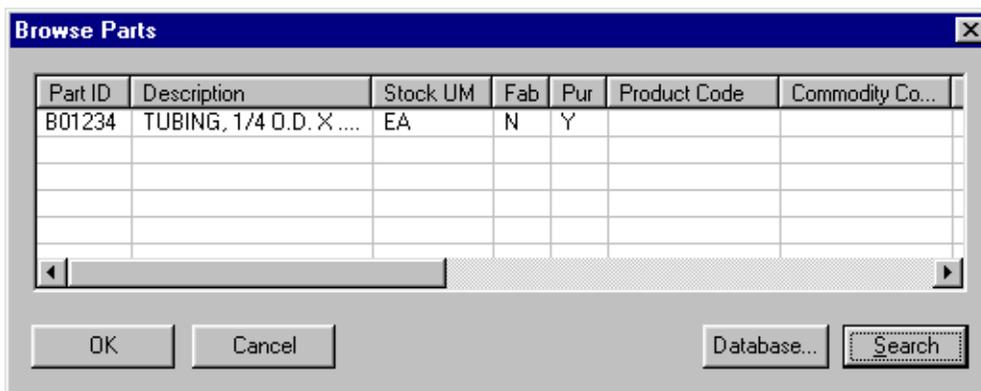
The Query dialog box is shown with the following fields and options:

- Part ID: [Empty]
- Description: TUBING%
- Stock UM: [Empty]
- Product Code: [Empty]
- Commodity Code: [Empty]
- Manufacturer's Name: [Empty]
- Manufacturer's Part ID: [Empty]
- Drawing ID: [Empty]
- Pref Vendor ID: [Empty]
- Primary Warehouse ID: [Empty]
- Quantity On Hand: [Empty]
- Fabricated
- Purchased
- Stocked
- Detail Only
- Tool Or Fixture

Buttons: OK, Cancel

3. Click **OK**.

The Query dialog closes, and the parts for which you are searching are displayed in the Browse Parts dialog.



The Browse Parts dialog box displays the following table:

Part ID	Description	Stock UM	Fab	Pur	Product Code	Commodity Co...
B01234	TUBING, 1/4 O.D. X ...	EA	N	Y		

Buttons: OK, Cancel, Database..., Search

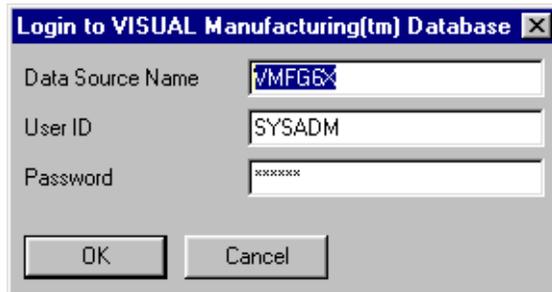
Selecting Parts from Different Databases

If you want to select parts from a different VISUAL database:

1. Click **Database**.



The Login to VISUAL Database Login dialog is displayed.



Note: Remember, you must specify your Data Source name in the Database Source Name field — your Data Source name must be different than your Database name.

2. Log into your VISUAL database. For more information on logging into VISUAL databases, refer to your VISUAL documentation or consult your system administrator.

The Browse Parts dialog is displayed, populated with your VISUAL parts information.

Note: Because VISUAL only recognizes parts from the same database as the current VISUAL session, VISUAL saves any parts you use in your Parts List (new or selected from a different database) as a new part during the current VISUAL session.

Editing Existing Parts Lists

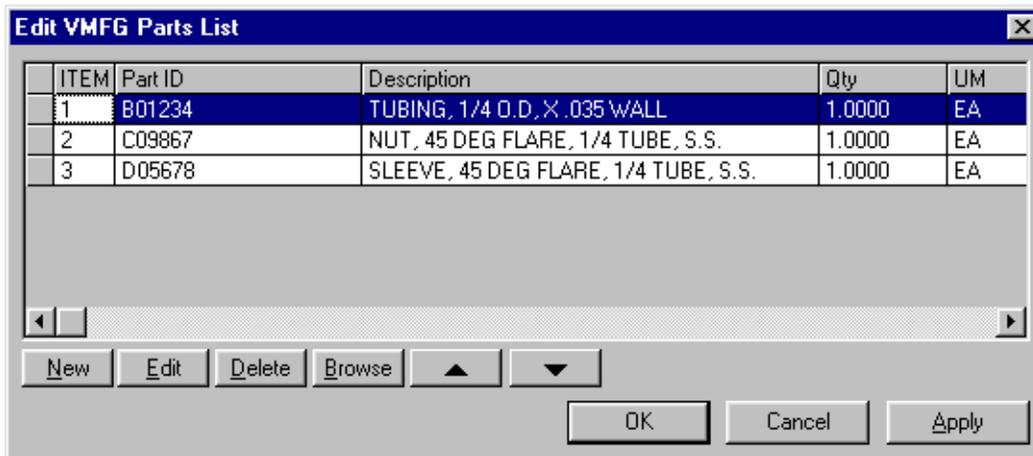
Using DesignLink, you can edit parts lists you have previously created in your AutoCAD drawings.

To edit your existing parts lists:

1. Open the drawing that contains the parts list you want to edit.
2. Click the DesignLink **Parts List** toolbar icon or from the DesignLink menu, select the **Parts List** option.
3. Click the row header for the line item you want to edit.

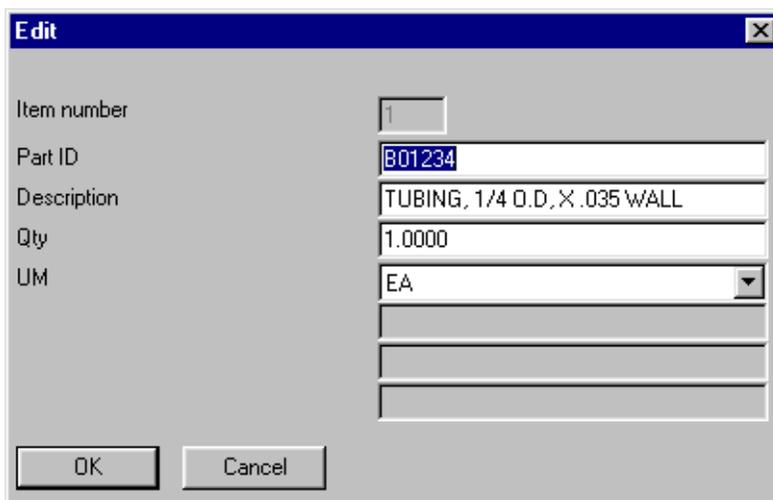


The selected row is highlighted.



4. Click **Edit**.

The Edit Line Item dialog is displayed.



5. Make any appropriate changes.
6. Click **OK**.

The Edit Line Item dialog closes and your changes are displayed in the Edit VMFG Parts List window.

7. Click **OK**.

DesignLink saves your changes and closes the Edit VMFG Parts List window.

This chapter includes the following information:

Topic	Page
Setting Up DesignLink Title Extensions	3-2
Creating DesignLink Title Extensions	3-8
Using DesignLink Balloons	3-12
Using the Multiple Design Environment (MDE)	3-16
Using the Design Center (ADC).....	3-17

As you produce and refine drawings in your design process, it is very important that you keep your drawing references up to date. DesignLink Title Extensions help you keep your drawings up to date and referenced correctly.

DesignLink Title Extensions are particularly helpful for integrating legacy drawings with VISUAL Enterprise. VISUAL uses the information contained in the DesignLink Title Extension to build the main header card of engineering masters, quote masters and work orders.

If your drawing contains a title block with attribute tags that are the same as those tags you identified in the DesignLink Title Extension Setup, you do not need to insert the Title Extension object into your drawing. DesignLink automatically retrieves the necessary information from your title block. If your title block contains attribute tags that are not the same as those tags you identified in the Title Extension Setup, you must insert the Title Extension object into your drawing.

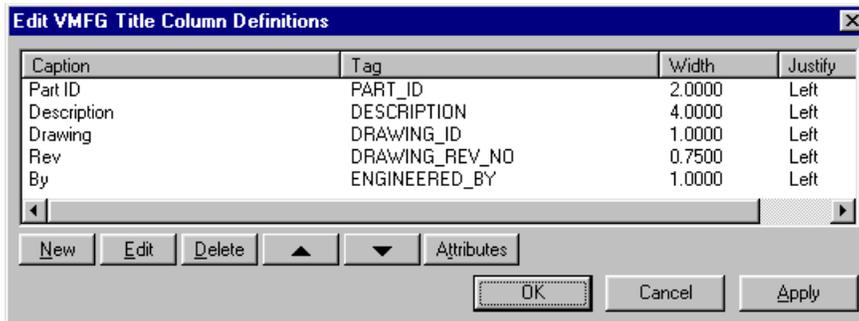
DesignLink Balloons help you reference which items in your Parts List belong to which objects in your drawing.

Setting Up DesignLink Title Extensions

After you have decided what information fields you want to include in your drawing title block, you must include those fields as column definitions in DesignLink.

1. Click the DesignLink **Title Extension Setup** icon or from the DesignLink menu, select **Title Extension Setup**.

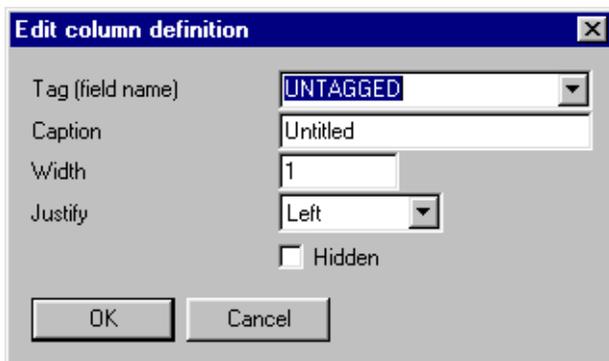
The Edit VMFG Title Column Definitions dialog is displayed.



A list of currently defined column definitions is displayed. If you have not previously defined any columns, only DesignLink's five default columns are displayed: **Part ID**, **Description**, **Drawing**, **Rev**, and **By**.

2. Click **New**.

The Edit Column Definitions dialog is displayed.



3. Specify this information in the Edit column Definitions dialog:

Tag (field name) – This field contains the actual name of the data field. This is the name that DesignLink assigns to this field when you export your data. Select a valid VISUAL tag from the drop-down list or click in the field and specify a tag name of your own.

You may want to use tag and caption names that have meaning to your company even if VISUAL will not assign the information to a field in the VISUAL window.

Caution: Follow your VISUAL database field naming protocol. VISUAL can ONLY import valid Tag IDs successfully.

If you delete the Part_ID column tag, you will not be able to create an Engineering Master in VISUAL using DesignLink. You can only create Work Orders and Quote Masters without Part IDs.

Caption – This field contains the name you want to give this field. Choose a name that most suits what this field represents.

Width – This field contains the width of the field in your drawing. DesignLink uses English units for the DesignLink Title Extension, regardless of your drawing units.

Note: *The Width value is an absolute value, unless you change the overall scaling factor to a value not equal to one. For more information on Scaling Factors, see “Changing Attributes” later in this chapter.*

If the length of the data contained in each column exceeds the specified column width, DesignLink automatically wraps the line until the appropriate information is displayed in a single column.

Justify – This field contains the text position within the column. You can select **Left**, **Center**, or **Right**.

Hidden – This check box indicates the display status of the column in your drawing. DesignLink automatically clears the Hidden check box allowing the column to appear in your drawing. If you do not want to display the column, select the Hidden check box.

DesignLink exports any data you specify in a hidden column.

If you want to conserve drawing space and hide columns (and still specify data in those columns), DesignLink exports your hidden column data even though they are not displayed in your drawing.

4. Click **OK**.

The Edit Column Definitions dialog closes and the new Column Definition is added to the Title Column Definitions List.

5. When you have finished adding your new column definitions, click **OK**.

The Edit VMFG Title Column Definitions dialog closes.

If you have previously placed this Title Extension into your drawing, the changes are displayed in your drawing Title Extension. If you have NOT previously placed your Title Extension into your AutoCAD® drawing, you are prompted for an insertion point for the drawing object.

Editing Column Definitions

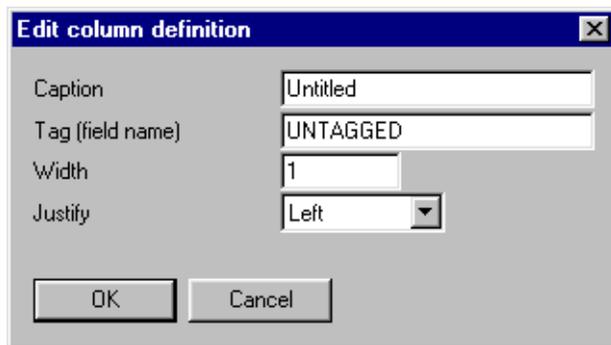
From time to time you may need to change a column definition. For example, if you want the text in a column to be center justified instead of left justified.

1. From the Edit VMFG Title Column Definitions dialog, click on the caption name for the column definition you want to edit.

The Caption Name is highlighted.

2. Click **Edit**.

The Edit Column definition dialog is displayed.



3. Make any appropriate changes you want.

Remember, VISUAL can ONLY import valid VISUAL Tag IDs successfully.

4. Click **OK**.

The Edit Column Definitions dialog closes and the changes you made are displayed in the Edit VMFG Title Column Definitions dialog.

Changing the Order of Column Definitions

You can change the order in which the columns are displayed in your drawing to suit the drawing conventions your company use.

Note: *Descending line items in DesignLink's Edit VMFG Column Definitions window are displayed left to right in your drawing Title Extension table.*

To change the order of a line item in your Title Extension Setup:

1. Click the row header for the row you want to move.

The row is highlighted.

2. Click the **Move Down** button to move the selected column heading down one line in your Title Extension Setup. Click the **Move Up** button to move the selected column heading up one line in your Title Extension setup.

Remember, you are defining in a vertical table what is displayed horizontally in your drawing.

Deleting Column Definitions

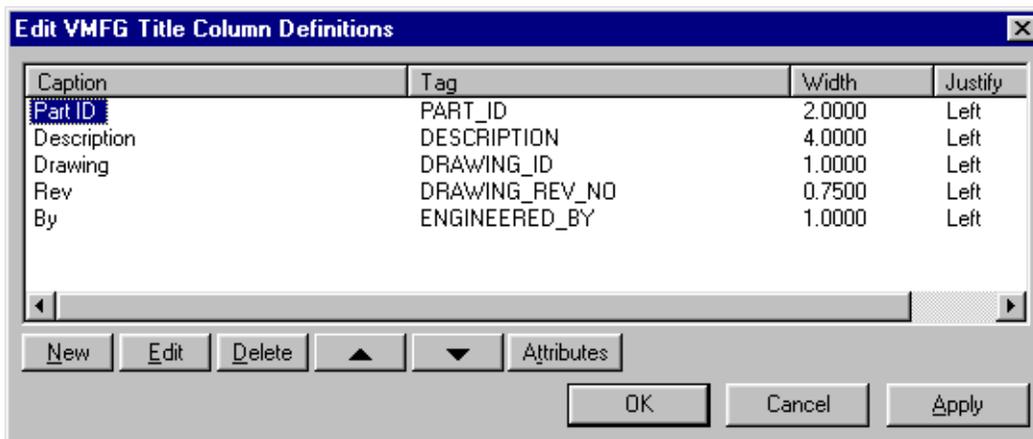
Caution: You CANNOT recover deleted line items. Before you click Delete, make sure that removal is the action you want to take.

Because VISUAL Engineering Masters require PART_IDs for the main header card, do NOT delete the Part_ID column tag if you want to create an Engineering Master.

If you want to delete a column definition:

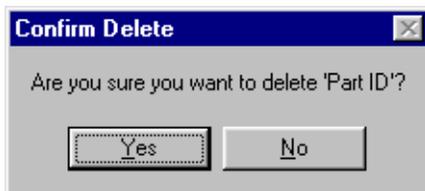
1. Click the Caption Name for the column definition you want to delete.

The selected name is highlighted.



2. Click **Delete**.

The Confirm Delete window is displayed.



3. To confirm the column deletion, click **Yes**. The selected column definition is removed from the list of column definitions. Any data that you have previously specified in this column is deleted.

To cancel the deletion of this column, click **No**.

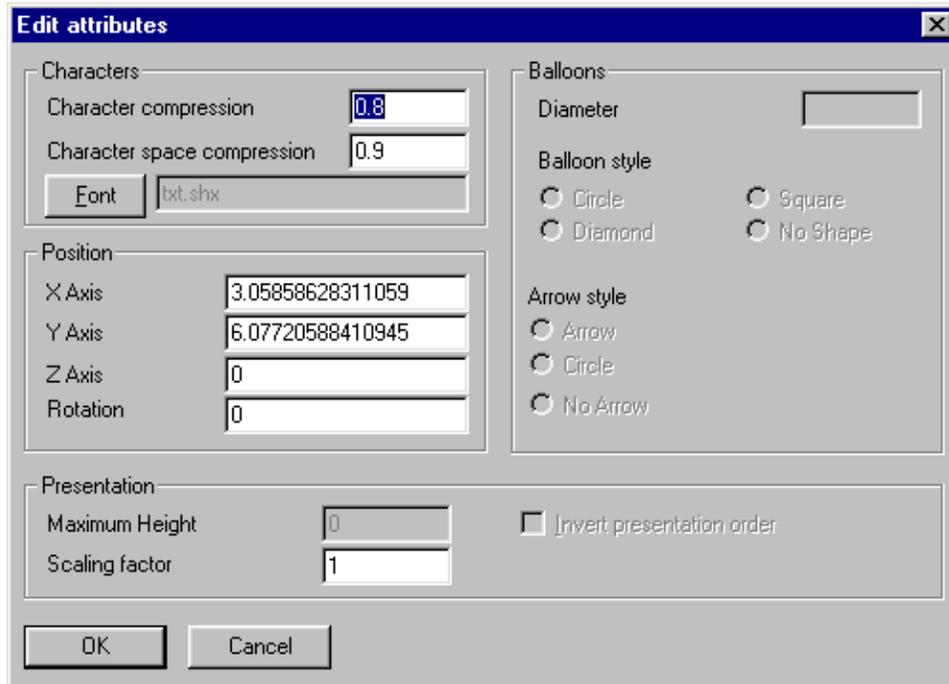
The Confirm Delete dialog closes.

Changing Attributes

DesignLink Title Extension has several user definable attributes that change the appearance of your Title Extension in your drawing.

1. From the Edit VMFG Title Column Definitions dialog, click **Attributes**.

The Edit Attributes window is displayed.



2. Make any appropriate changes you want.
3. In the Characters section, you can change the following:

Character Compression – This field contains the factor by which you want to horizontally scale all of your text characters.

Your text characters remain the same height regardless of the character compression you assign them.

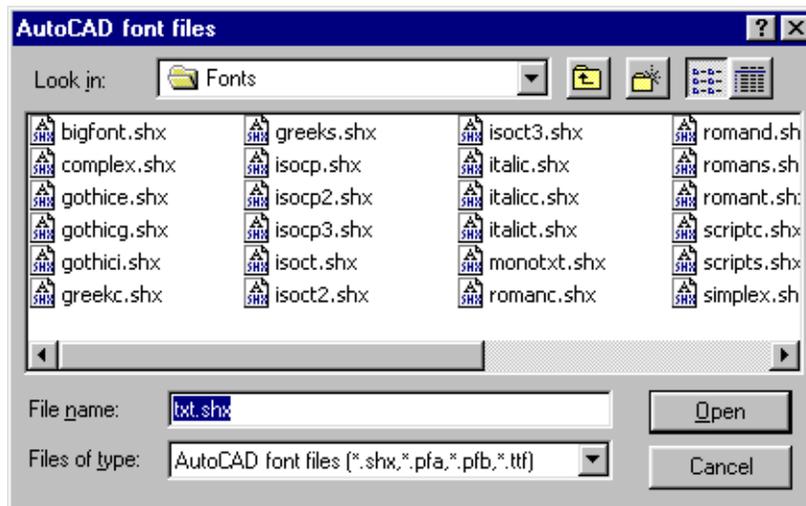
Character Space Compression – This field contains the relative scaling factor by which you want to horizontally scale ONLY the space between your text characters.

Your characters remain the same height and size, regardless of the character space compression you assign them.

Changing Fonts – If you want your Title Extension's text to display as a different font style:

- a. From the Edit Attributes window, click **Font**.

The AutoCAD Font Files search window is displayed.



- b. Navigate to, and select the font style you want to use.
- c. Click **Open**.

The AutoCAD Font Files search window closes.

4. In the Position section, you can change the following:

Because AutoCAD drawings can be two dimensional or three dimensional, DesignLink can place your Title Extension on your drawing, in a specific location, based on the three UCS (User Coordinate System) or WCS (World Coordinate System) coordinates—X, Y, and Z.

X Axis – This field contains the X location of your Title Extension on your drawing, side to side on your screen. DesignLink automatically changes the X Axis figure when you manually move the X location of your Title Extension, within your drawing.

Y Axis – This field contains the Y location of your Title Extension on your drawing, up and down on your screen. DesignLink automatically changes the Y Axis figure when you manually move the Y location of your Title Extension, within your drawing.

Z Axis – The Z Axis contains the Z location of your Title Extension on your drawing, in and out on your screen. This dimension is **ONLY** valid on three dimensional drawings. DesignLink automatically changes the Z Axis figure when you manually move the Z location of your Title Extension, within your drawing.

If you want to place, or move your Title Block to a specific location on your drawing, specify the location coordinates you want in the appropriate Axis fields.

Note: You can also change the location of your Parts List table within your AutoCAD drawing workspace by capturing and activating one of the table's grip points, or corners.

Rotation – This field contains the rotation angle of the Title Extension.

Unless you have set the AutoCAD setting for Angles in Drawing Units to clockwise, the Rotation angle is measured in a counterclockwise direction.

If you want to rotate your Title Extension to a specific orientation on your drawing, specify the appropriate rotation angle in the Rotation field.

5. In the Presentation section, you can change the following:

Scaling Factor – When you place this Title Extension on your drawing, DesignLink scales your complete Title Extension as one object, by the factor you specify here. If you want your Title Extension to display larger, specify a larger scaling factor.

Because your DesignLink Title Extension is an object defined in English units, Metric drawings may require scaling factors in excess of 25.

Note: You can *ONLY* scale your DesignLink Title Extension from the Edit Attributes window. You *CANNOT* scale your DesignLink Title Extension as an AutoCAD object. (Using AutoCAD Scale or Stretch commands.)

6. When you have finished making the changes you want, click **OK**.

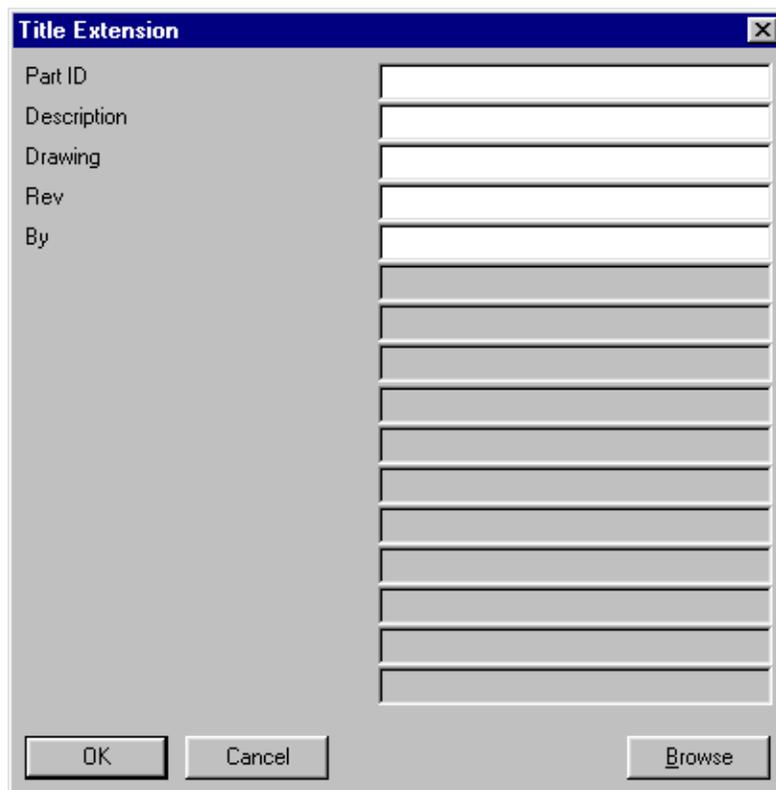
The Edit Attributes window closes.

Creating DesignLink Title Extensions

Specify the information you want displayed in your drawing Title Extension.

1. On the DesignLink toolbar, click the DesignLink **Title Extension** icon or from the DesignLink menu, select **Insert/Edit Title Extension**.

The Title Extension dialog is displayed.



The Title Extension field names that are displayed reflect any column definitions you have previously specified. In the example, only the default field names are displayed.

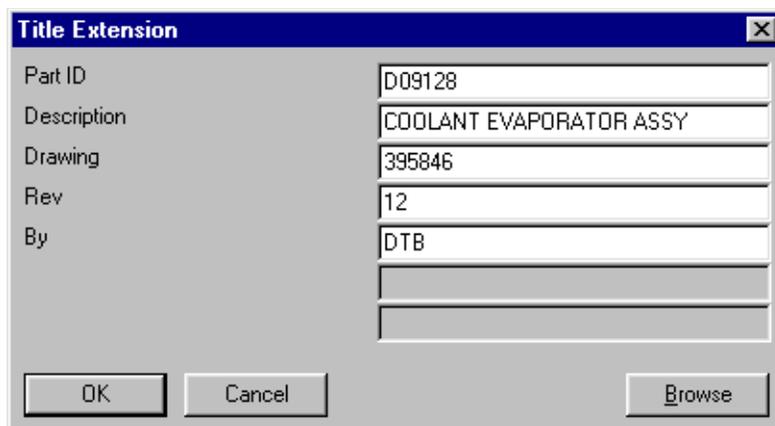
2. Specify the information you want displayed in your Title Extension.
3. Click **OK**.
The Title Extension dialog closes.
4. Select an insertion point on your drawing where you want to insert your DesignLink Title Extension.
For more information on inserting objects into AutoCAD drawings, see your AutoCAD documentation.

Editing Title Extensions

You can edit the information in your Title Extension after you have placed it in your AutoCAD drawing.
To edit your Title Extensions:

1. On the DesignLink toolbar, click the DesignLink **Title Extension** icon or from the DesignLink menu, select **Insert/Edit Title Extension**.

The Title Extension dialog is displayed.



Field Name	Value
Part ID	D09128
Description	COOLANT EVAPORATOR ASSY
Drawing	395846
Rev	12
By	DTB

The Title Extension field names that are displayed, reflect any column definitions you have previously specified. In the example, only the default field names are displayed.

2. Make any appropriate changes you want.
3. Click **OK**.

The Title Extension dialog closes.

Browsing

Use the Browse button to select a part from your VISUAL database.

1. Click **Browse**.

A VISUAL Database Login dialog is displayed.

Note: Remember, you must specify your Data Source name in the Database Source Name field — your Data Source name must be different than your Database name.

2. Log into your VISUAL database. For more information on logging into VISUAL databases, see your VISUAL documentation or consult your system administrator.

The Browse Parts dialog is displayed, populated with your VISUAL parts information.

Part ID	Description	Stock UM	Fab	Pur	Product Code	Commodity Code	Mfg Name	Mfg
093 COIL	.093 COIL, C	500FT-REE	N	Y				
093 THK	093 SHEET,	4X8SHEET	N	Y				
1/4PLATE	1/4 INCH ST	10X10_SH	N	Y		STEEL	ABC INC.	
1/4X3AN	1/4 INCH BY	10_FT_LEM	N	Y		ANGLE		
1000	TEST BUSHI	FT	Y	Y				
100035	3/4" BRASS	EA	Y	N				
100799D	oigagciarg	EA	Y	N				
201001	HEX BOLT 1,	EA	Y	Y				
201002	HEX BOLT 1,	EA	Y	Y				
3217704	Flange, 3" C	EA	Y	Y				
3217704	Elbow, 90 LR	EA	Y	Y				
3217704	Coupling, Bol	EA	Y	Y				

The data displayed in your Parts Browse dialog is automatically sorted alphanumerically, by Part ID. If you want to sort the data in reverse order, by Part ID, click the Part ID column header.

If you want to view your data sorted on another column, click the appropriate column header. Click the column header again to reverse the sort order of that column.

3. Click on the row header for the part you want to use.

The selected row is highlighted.

4. Click **OK**.

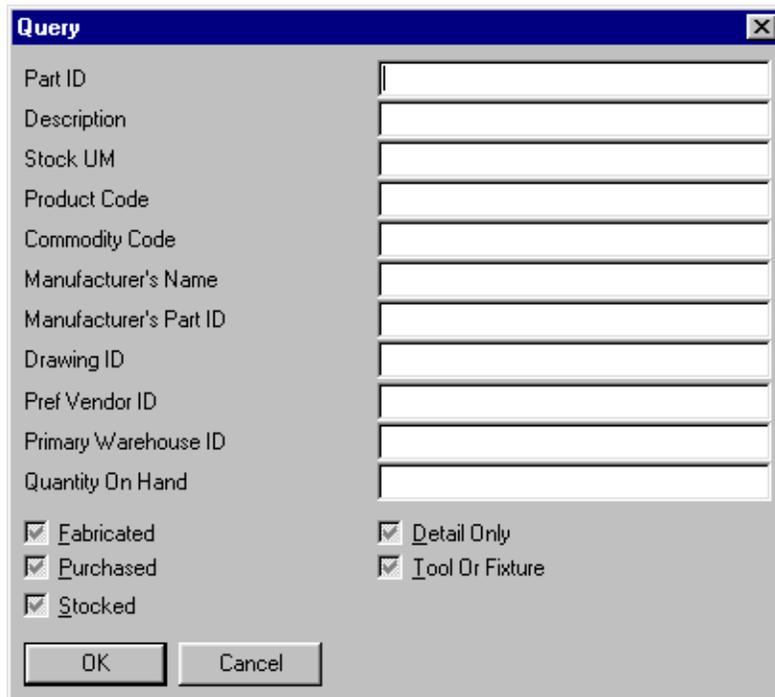
The Browse Parts dialog closes, and the selected part is displayed in the DesignLink Title Extension.

Using Browse Filtering

If your VISUAL parts database contains several hundreds or even thousands of parts, you may find DesignLink's Search function very helpful when locating a specific part.

1. In the Browse Parts dialog, click **Search**.

The Query dialog is displayed.



2. Specify the information for the parts for which you want to search.

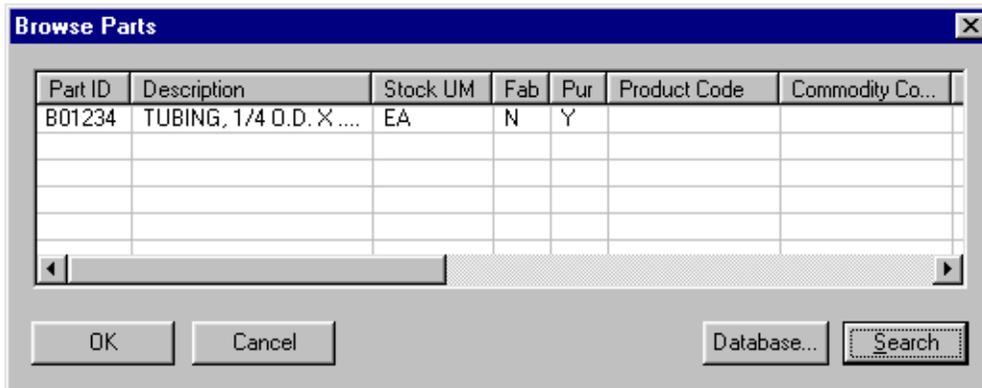
You can use the percent % character to specify "Wildcard" characters. For example, if you want to search for all the parts that have a description that begins with **TU**, enter **TU%**. DesignLink searches your VISUAL database, and returns **ONLY** the parts whose description begins with **TU**.

DesignLink searches your VISUAL database for the information you specified in each filter field. For example, if you want to search for all Purchased parts that have a description that begins with **TUBING**, enter **TUBING%** in the Description field, select the Purchased check box and clear the Fabricated check box. DesignLink searches your VISUAL database, and returns **ONLY** purchased parts whose descriptions begin with **TUBING**, regardless of the length of the description.

DesignLink queries are case sensitive.

3. Click **OK**.

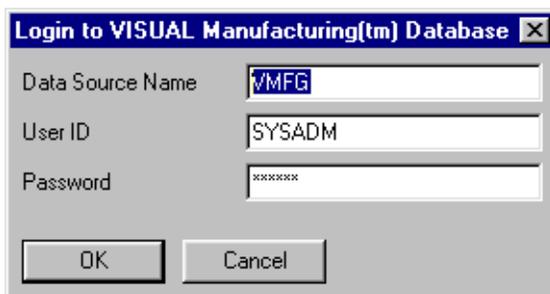
The Query dialog closes, and the specific part you selected to search is displayed in the Browse Parts dialog.



Selecting Parts from Different Databases

If you want to select a part from a different VISUAL database:

1. Click **Database**.
2. The Login to VISUAL Database dialog is displayed.



Note: Remember, you must specify your Data Source name in the Database Source Name field — your Data Source name must be different than your Database name.

3. Log into your VISUAL database. For more information on logging into VISUAL databases, see your VISUAL documentation or consult your system administrator.

The Browse Parts dialog is displayed, populated with your VISUAL parts information.

Note: Because VISUAL only recognizes parts from the same database as the current VISUAL session, VISUAL saves any parts you use in your Title Extension (new or selected from a different database) as a new part during the current VISUAL session.

Using DesignLink Balloons

If your drawing contains The DesignLink Parts List, you may want to indicate which drawing objects represent which items in the Parts List.

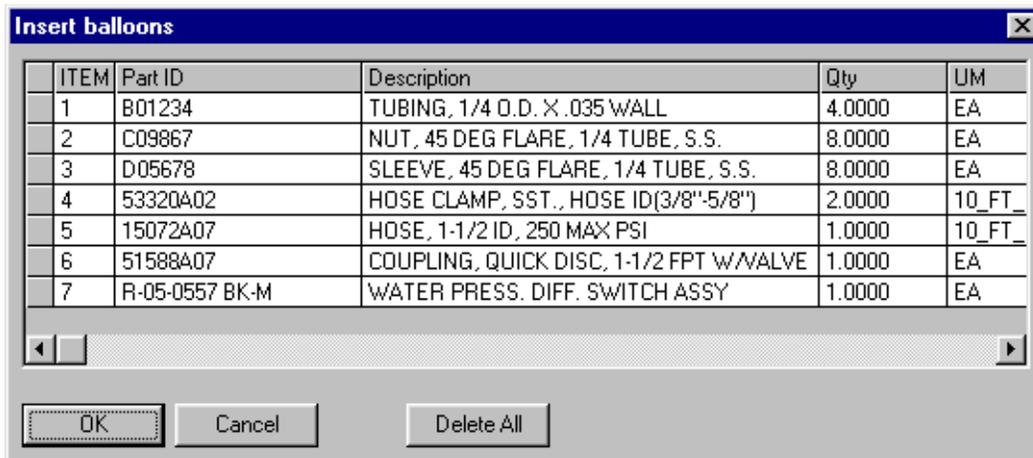
DesignLink Balloons are linked directly to your DesignLink Parts List. Any edits or changes to your DesignLink Parts List result in corresponding changes to your DesignLink Balloons.

Use DesignLink's Balloon function.



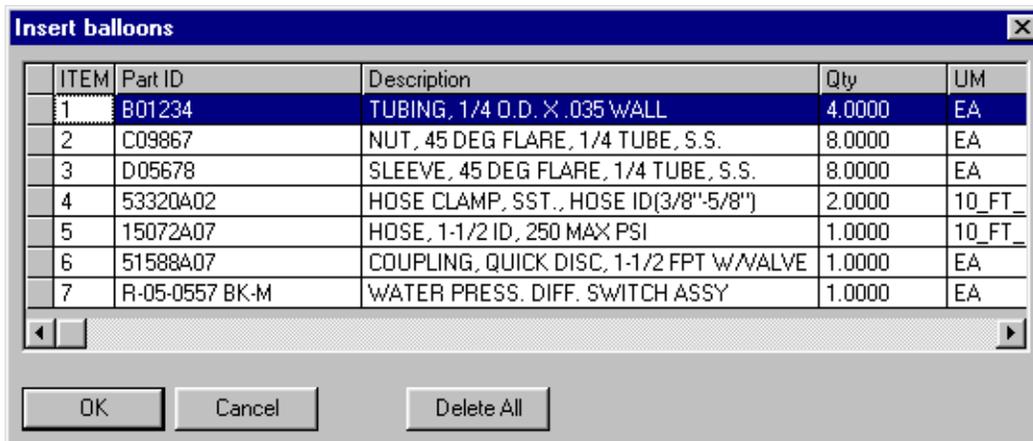
1. On the DesignLink toolbar, click the DesignLink **Balloon** icon or from the DesignLink menu, select **Balloons**.

The Insert Balloons dialog is displayed.



2. Click the row header of the part for which you want to create a balloon.

The line item is highlighted.



3. Click **OK**.

The Insert Balloons dialog closes.

4. Select an insertion point on your drawing where you want to insert this balloon reference.

For more information on inserting objects into your AutoCAD drawings, see your AutoCAD documentation.

5. Continue referencing parts on your drawing until you have referenced all of the parts you want.

Note: DesignLink only links Balloons that you add from the Insert Balloons dialog to the Parts List. DesignLink will NOT link any Balloons to the Parts List that you copy.

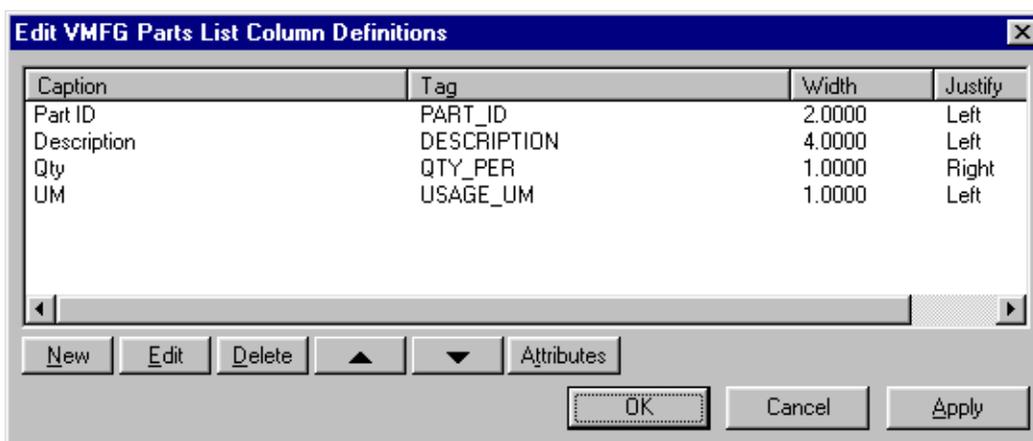
If you want to use multiple occurrences of the same balloon number, use Insert Balloons for each balloon you want to display in your drawing.

Changing Balloon Attributes

DesignLink Balloons have several user definable attributes that change the appearance of your Balloons in your drawing.

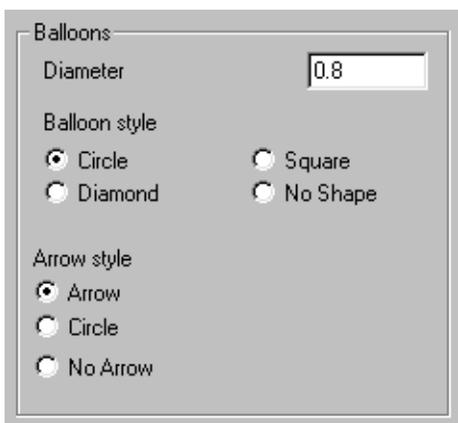
1. Click the DesignLink **Parts List Setup** icon or from the DesignLink menu, select **Parts List Setup**.

The Edit VMFG Parts List Column Definitions window is displayed.



2. From the Edit VMFG Parts List Column Definitions dialog, click **Attributes**.

The Edit Attributes window is displayed.



3. If you want to change your balloon's relative scaling size, click in the Diameter field and specify the scaling factor you want to use.

Note: You can *ONLY* scale your DesignLink Balloons from the Edit Attributes window. You *CANNOT* scale your DesignLink Balloons as AutoCAD objects. (Using AutoCAD Scale or Stretch commands.)

4. If you want to use a different Balloon Style, clicking on the appropriate option button.
You can select: **Circle** (Default), **Diamond**, **Square**, or **No Shape**.
5. If you want to use a different Arrow Style, select the Arrow Style option you want to use. You can select: **Arrow** (Default), **Circle**, or **No Arrow**.
6. Click **OK**.
The Edit Attributes window closes.
7. In the Edit VMFG Parts List Column Definitions dialog, click **OK**.
The Edit VMFG Parts List Column Definitions dialog closes and your selected Balloon Attributes are displayed in your drawing.

Moving Balloons in Your AutoCAD Drawings

Because DesignLink Balloons are AutoCAD drawing objects, they have object grips. If you want to move the position of a Balloon or Balloon Arrow, activate the associated grip and drag the grip to the location you want.

For more information on AutoCAD object selection and movement, see your AutoCAD documentation.

Deleting Balloons in your AutoCAD Drawings

You can delete unwanted DesignLink Balloons just like other AutoCAD objects. For example, you can highlight the balloon to be deleted and then type in Erase at the AutoCAD command prompt. The DesignLink Balloon is removed from the drawing.

If you would like to delete all the DesignLink Balloons, you may find it more convenient to use the Delete All function in DesignLink Balloons:



1. On the DesignLink toolbar, click the DesignLink **Balloon** icon or from the DesignLink menu, select **Balloons**.
The Insert Balloons dialog is displayed.
 2. Click **Delete All**.
-

The Delete All Balloons prompt is displayed.



3. If you want to delete all of the DesignLink Balloons in your drawing, click **Yes**.

The Insert Balloons dialog is displayed again.

If you do NOT want to delete ALL of the DesignLink Balloons, click **No**.

The Insert Balloons dialog is displayed again.

Caution: Do NOT add any new Balloons to your drawing until you have completed the Delete All Balloons function.

4. Click **OK**.

The Insert Balloons dialog closes and DesignLink deletes ALL of the Balloons in your AutoCAD drawing.

Using the Multiple Design Environment (MDE)

Using a feature known as the AutoCAD Multiple Design Environment (MDE), you can open more than one drawing in a single AutoCAD session.

When you have opened multiple drawings, you can simply click anywhere in any of the open drawings to make that drawing active. Using the MDE, you can quickly and easily copy-and-paste or drag-and-drop objects from one drawing to another automatically copying any associated DesignLink Balloons in the process. This feature is extremely helpful if you want to create new designs that employ objects that were previously created in existing designs. For example, if you had a new design requirement that is similar to an existing design, you can open the existing design drawing and copy the appropriate objects, including your DesignLink Parts List and Title Extension, into your new drawing.

If you want to copy your DesignLink objects from one drawing to another using the MDE, open the drawing that contains the objects you want to copy and the drawing where you want to paste the objects.

To copy and paste using your Windows Clipboard:

1. Highlight the DesignLink objects you want to copy.
 2. Use AutoCAD **COPYCLIP** or **COPYBASE** commands to copy the objects to your clipboard.
 3. Activate the destination drawing by clicking anywhere in the drawing where you want to paste the objects.
 4. Use AutoCAD **PASTECLIP** or **PASTEORIG** commands to insert the objects into the active drawing and specify an insertion point for the objects.
-

To move objects between drawings using drag-and-drop:

1. Highlight the DesignLink objects you want to copy.
2. Click anywhere on a highlighted object and hold the mouse button down.

Do not select any grips.

3. Drop the highlighted objects in the location you want in the destination drawing.

Your copied DesignLink objects will have the same properties in the destination drawing as they did in the source drawing even if you drop the object in a different environment than the original.

Note: *If you copy the Parts List from the source drawing, the AutoCAD program automatically copies DesignLink Balloons.*

You can now modify the objects you copied to your destination drawing independently from the original drawing objects.

To promote consistency in your drawings, you may want to use the AutoCAD **MATCHPROP** command to transfer properties from objects in one drawing to objects in another drawing.

For more information about copying objects between drawings, see your AutoCAD documentation.

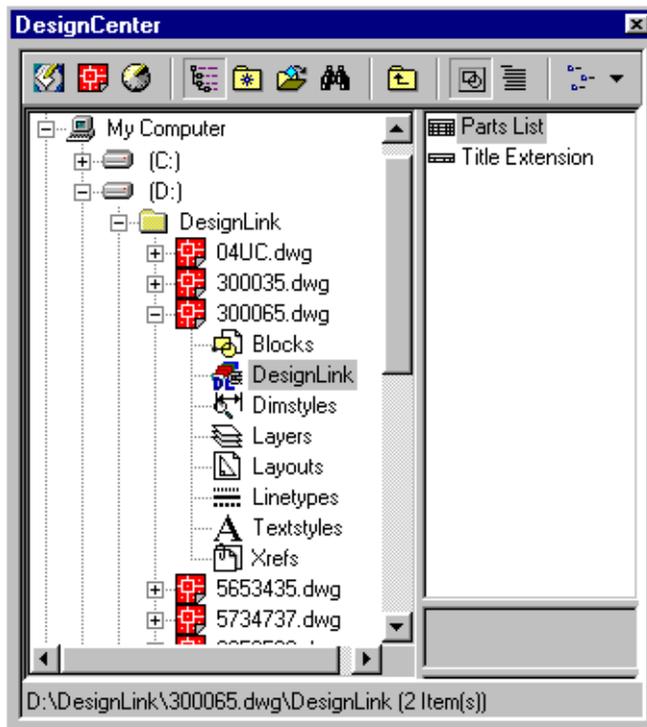
Using the Design Center (ADC)

The AutoCAD DesignCenter (ADC) is an intuitive interface similar to Windows Explorer.

You can use the ADC to:

- Locate and organize drawing data.
 - Insert drawing content by dragging components from a source document into your current drawing.
-

You can list standard drawing content such as: **blocks**, **dimstyles**, **layers**, **layout**, **linetypes**, **textstyles**, and **xrefs** from drawings that reside on client (local) computers, network servers, and Internet locations. You can also list customized drawing content such as DesignLink objects.



Using the AutoCAD DesignCenter, you can quickly and easily locate existing drawings that contain DesignLink information. Without opening the source drawing, you can drag the DesignLink Parts List and Title Extension objects into any open drawing automatically copying any associated DesignLink Balloons in the process.

This feature is extremely helpful if you want to create new designs that employ objects you previously created in existing designs.

For example, if you have a new design requirement that is similar to an existing design, you can search the DesignCenter for drawing content such as keywords, blocks, and drawing files that match your new design requirements and drag the DesignLink Part List from the DesignCenter into the new drawing.

If you want to copy your DesignLink objects using ADC, use the AutoCAD ADCENTER command to open the DesignCenter interface.

After you have located the drawing from which you want to copy a Parts List:

1. In tree view, expand the drawing node to reveal the drawing content.
2. Click on the DesignLink content icon.

If a DesignLink Parts List or Title Extension is present in the drawing, icons for each are displayed in the adjoining pane.

3. Click on the appropriate icon and, holding the mouse button down, drag the icon into position in an open drawing.

Your copied DesignLink objects will have the same properties as the current drawing properties (for example, layer, linetype, and color) and will be located in the current model or layout environment.

Note: *If you copy the Parts List from the source drawing, your AutoCAD program automatically copies DesignLink Balloons.*

You can now modify the objects you copied to your destination drawing independently from the original drawing objects.

This chapter includes the following information:

Topic	Page
Saving Design Content to a File	4-2
Emailing DesignLink Export Files	4-3
Starting VISUAL from within the AutoCAD Program.....	4-5
Building Masters and Work Orders from DesignLink Drawing Information.....	4-6

DesignLink has two methods by which you can export parts list and other design information. How you export your DesignLink Parts List depends on how you want to use the information it contains and on which method best fits within the context of your current business practices.

These methods are especially useful if your design personnel are in a different location than your manufacturing plant.

- You can save DesignLink information to a delimited text file in an appropriate directory on your computer or in a remote directory on your network. This enables you to run standard backup and archival programs providing your Bill of Material text files the same data safety as your VISUAL database.
- If your email program is running you can open a new email message and email the current Bill of Material from within your AutoCAD® program.

If you are a recipient of an email with an attached DesignLink BOM and have VISUAL installed on your computer, you can double-click on the attached file, causing VISUAL to start. VISUAL automatically imports the information from the attached DesignLink file.

What is in the DesignLink Export File?

Your DesignLink Parts List contains the information that VISUAL uses to populate material cards in the Manufacturing window. Your DesignLink Title Extension, or your standard title block, contains the information that VISUAL places in the main header card of a Master.

Using DesignLink to define your Parts Lists and Title Extensions with information beyond the traditional part number, description and quantity, you can evolve your AutoCAD drawings into a more complete design document. DesignLink export files also contain additional design information located in your AutoCAD drawing such as:

- Specifications
- Process notes
- Vendor instructions
- Inspection requirements
- Critical characteristics

You may want to include much of this information on your operation cards in the Manufacturing window. DesignLink captures this data in its export file.

This manual refers to the DesignLink export file information as “Design Content”. Design Content includes the actual Parts List, Title Extension, and all plain text and attributed text you have specified in the drawing or in a drawing block within a drawing.

Saving Design Content to a File

If you want to transfer several of your DesignLink bills of materials at once, using the Internet or your network, you must save each drawing’s Design Content using the DesignLink Export File function. You must open each drawing separately and save the Design Content in each drawing as a separate .VMX file.

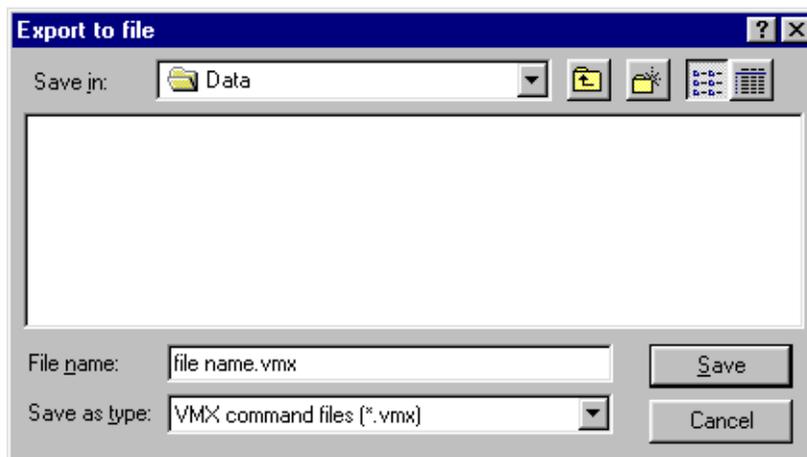
Once you have saved the Design Content you want, you can send them or email them using any standard file transfer method.

To save your DesignLink Bill of Materials as a .VMX file:



1. On the DesignLink toolbar, click the DesignLink **Export File** icon or from DesignLink menu, select **Create Export File**.

The Export to File dialog is displayed.



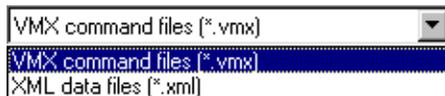
2. Search and select the Save in destination you want to use for this file.
-

You can use DesignLink's Export File function to develop a suitable work queue for Masters and Work Orders you need to create in your VISUAL system.

If you are charged with the responsibility of creating Masters and Work Orders in your VISUAL system, you may want to select a local destination for your .VMX files. This provides easier file access to you.

If you want to save your .VMX files in a directory that others can easily access, you may want to select a file destination on a network drive. A network destination drive also provides a place from which you can regularly back up your .VMX files.

3. Click in the File Name field and specify the name you want to use for this file.
4. If you want to use a different file format than .VMX, click the drop-down arrow and select the file format you want to use from the list.



Caution: If the file extension .XML is set up on your computer for Internet usage, you may want to export your DesignLink files using the .VMX file extension.

5. Click **OK**.

The Export to File dialog closes and DesignLink creates the selected file in the location you specified.

Emailing DesignLink Export Files

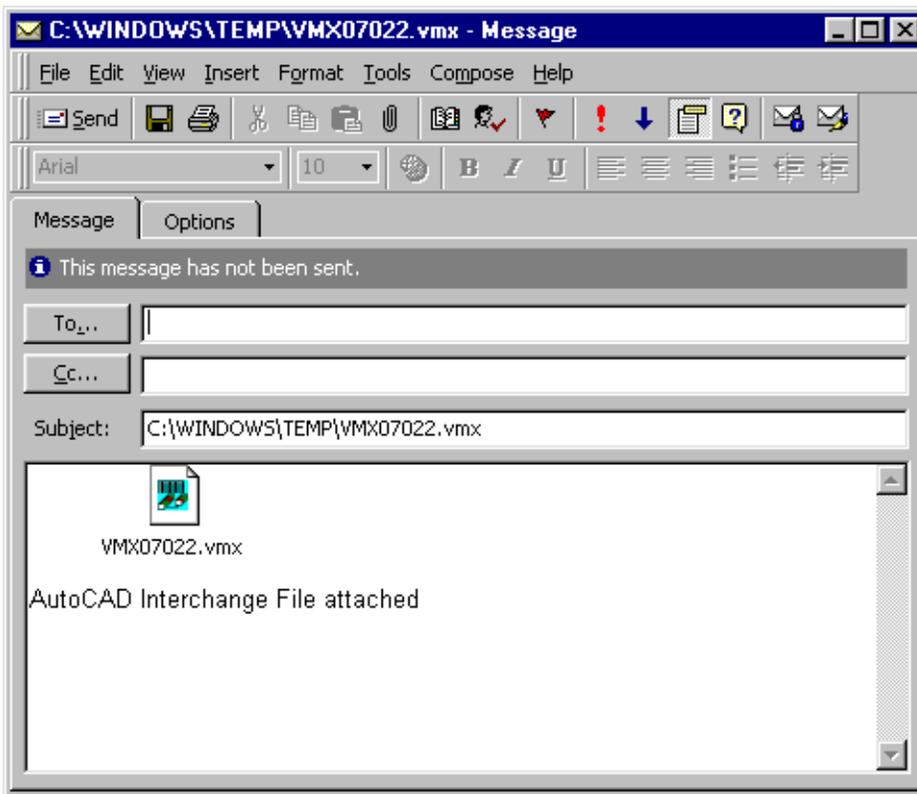
After you have completed your drawing design, you may want to email a copy of the Design Content to a colleague. The recipient of your email can import the Design Content in the attached .VMX file directly into their VISUAL program.

To email your export files, make sure your email program is running and follow these steps:

1. On the DesignLink toolbar, click the DesignLink **Send File** icon or from the DesignLink menu, select **Send File**.

An email message is displayed.

The example shows Microsoft Outlook.



DesignLink saves your Design Content to a temporary .VMX file, and populates the Subject line of your email with the temporary name of that file. DesignLink also attaches a copy of that temporary file to the body of your email.

2. Click **To** in your email program and address your email.

Note: You may want to change the information in your email subject line to reflect something that is more easily recognized by your colleagues. For example, you may want to specify a Part ID or a project number.

Addressing and sending emails varies from program to program. For more information on addressing and sending your email, see your email program documentation.

3. Send your email.

If you are a recipient of an email with an attached .VMX file and have VISUAL installed on your computer, you can double-click on the attached file, causing VISUAL to start. VISUAL automatically imports the information within the attached DesignLink Export file.

Starting VISUAL from within the AutoCAD Program

After you have completed your drawing design using DesignLink, you can start the VISUAL program from within your AutoCAD environment and work with your exported files.

Note: *You must have the correct authorizations to access and work in VISUAL. Contact your system administrator to setup your VISUAL authorizations.*

To start VISUAL:

1. Click the Run VISUAL shortcut icon on the toolbar or from the DesignLink menu, select **Run VISUAL**.

`_vmrun` is displayed in the AutoCAD command line area, indicating you have selected to start VISUAL. After VISUAL starts to load, the AutoCAD command line returns to “ready.”

Note: *The VISUAL Login dialog is different from the VISUAL Database Login dialog. You must specify the Database Name here NOT the Database Source Name.*

2. Log into Infor VISUAL.

For more information on logging into VISUAL Enterprise, see your VISUAL documentation or consult your system administrator.

Your database engine starts and VISUAL starts. The Manufacturing window is displayed with the Engineering Master/ Work Order dialog open.

You can now use your DesignLink export files to build VISUAL work orders and engineering masters.

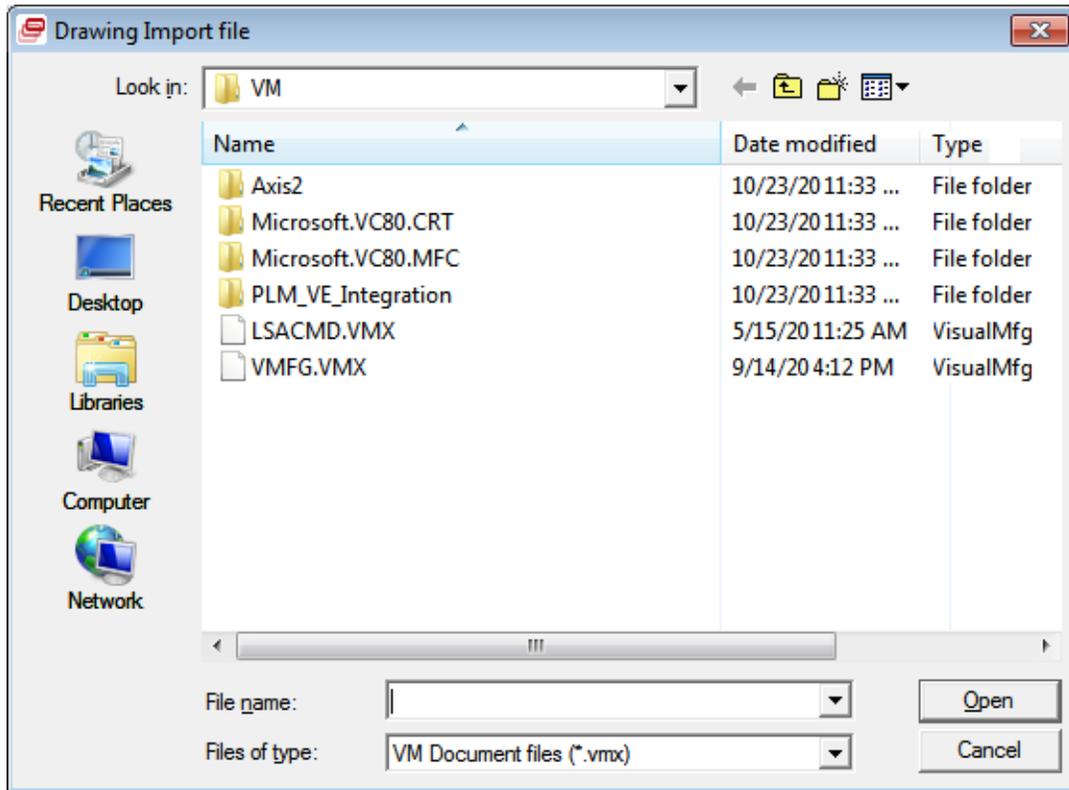
Building Masters and Work Orders from DesignLink Drawing Information

If you want to import your DesignLink Export file into VISUAL Enterprise, you must use VM's Import from Drawing utility.

For more information about the Manufacturing window, see your VISUAL documentation.

1. Open the Manufacturing Window and select **Master/Work Order from Drawing** from the File menu.

The Drawing Import File window is displayed.



2. Browse to and click on the file you want to import into VISUAL Enterprise.
The selected file is highlighted and is automatically displayed in the File Name field.
3. Click **Open**.

The Engineering Master/Work Order window is displayed, populated with the information from your DesignLink Title Extension.

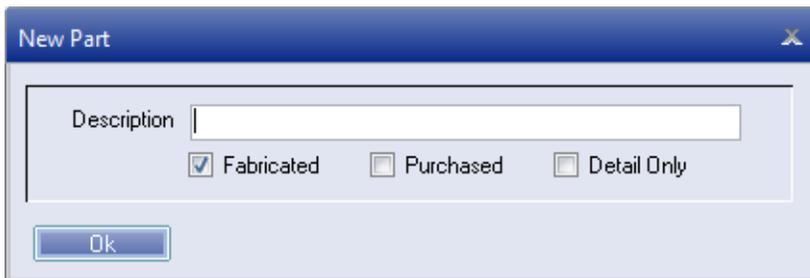
If you are working with Work Orders and Quotes with non-Part ID parts, you may find it helpful to create the main header card before you select Import from Drawing.

If the DesignLink export file you selected does NOT contain a Title Extension (or the Title Extension is missing a valid Part ID) and you are creating a Work Order or Quote Master, you must specify a Base ID in the Base ID/Job ID field in order to continue. If you want to create a Quote Master using the same export file, you must also specify an Engineering ID in the Eng ID/Lot ID field.

If the part you selected does NOT exist in your VISUAL database, VISUAL prompts you to create a new part.

If you select **No**, the Engineering Master/Work Order window is displayed so that you can specify an existing Part ID.

If you select **Yes**, the New Part dialog is displayed. VISUAL automatically populates the Description field with information from your DesignLink Title Extension.



If you want to change the description, click in the Description field and make any appropriate changes.

Caution: If you change the description of your new part to something different than the description in your DesignLink Title Extension, you will NOT maintain data integrity with your drawings.

Select the **Fabricated**, **Purchased**, and/or **Detail Only** check boxes that apply to this part.

4. Click **OK**.

The Engineering Master/Work Order window is displayed, populated with the Part ID and Description from your DesignLink Title Extension.

5. Specify any additional information.

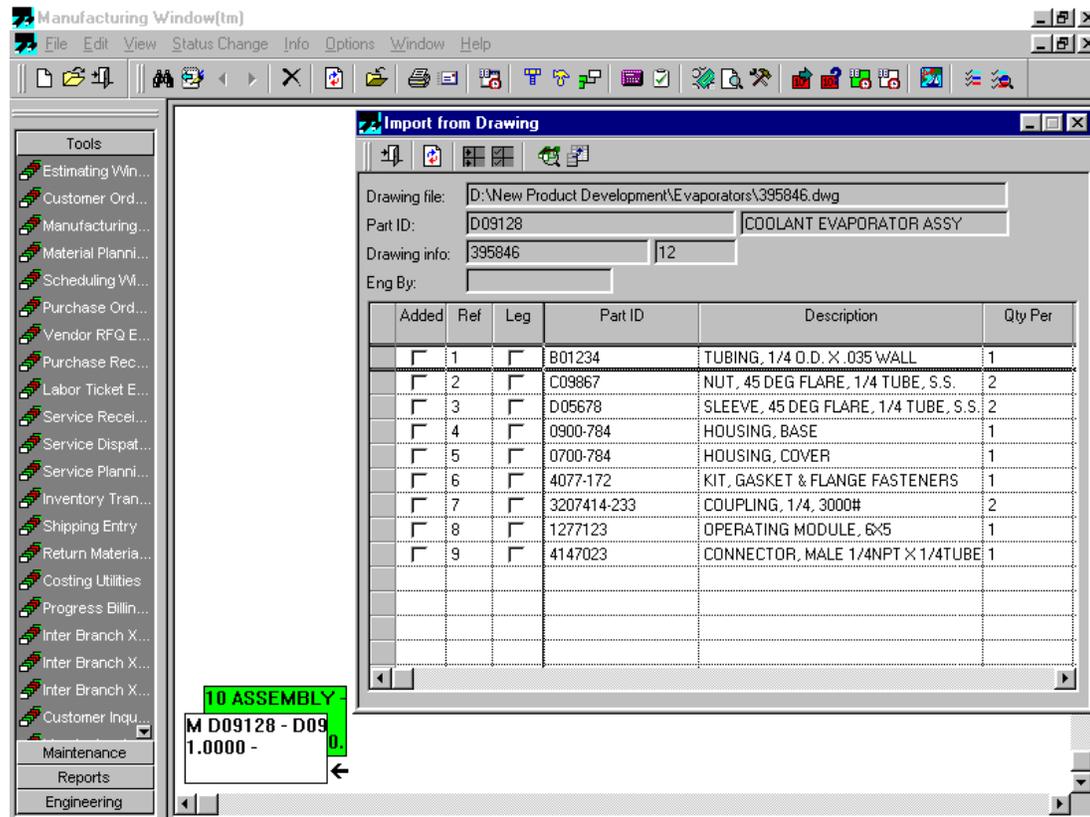
You may want to create a Work Order or Quote Master instead of an Engineering Master.

6. Click **Save**.

If your DesignLink Title Extension does not contain a Usage Unit of Measure, the Unit of Measure dialog is displayed. Select a Usage Unit of Measure and click **OK**.

Your Title Extension information is saved to your VISUAL database, and a header card is added to the Manufacturing window.

The Import from Drawing window is displayed.



7. You must first add an operation to your Engineering Master before you can add any parts.
For more information on building engineering masters and work orders in VISUAL Enterprise, see your VISUAL documentation.
8. From the Edit menu, select **Add Operation**.
An operation card is displayed in the Manufacturing window.
9. Click on the Operation Card.
A small arrow is displayed next to the operation card to indicate that you have selected it.
10. In the Import from Drawing window, click the row header for the part you want to add.
The row you selected is highlighted.
11. In the Import from Drawing window, click **Add**.
The selected part is added to the Manufacturing window as a material card.
As you add material cards to your master, the card is also populated with any existing part information from your VISUAL database.

If any part does NOT exist in your VISUAL database, you are asked to create a new part.

If you do NOT want to create a new part, click **No**.

An error message is displayed notifying you that VISUAL is unable to save the material to the master. The Import from Drawing window is displayed so you can continue to build your master.

If you want to create a new part, click **Yes**.

The New Part dialog is displayed. The Description field is automatically populated with the information from the row item in the Import from Drawing window.

If you want to change the description, click in the Description field and make any appropriate changes.

Caution: If you change the description of your new part to something different than the description in your DesignLink Parts List, you will NOT maintain data integrity with your drawings.

Select the Fabricated, Purchased and/or Detail Only check boxes that apply to this part and click **OK**.

The selected part is added to the Manufacturing window as a material card.

Note: *The Import from Drawing process does not override any information in your VISUAL database.*

Some part information cannot be added to you VISUAL database using the Manufacturing Window.

For more information on creating new parts, see your VISUAL documentation.

In the Import from Drawing window, a check is displayed next to each part you add.

<input checked="" type="checkbox"/>	1	<input type="checkbox"/>	B01234
<input checked="" type="checkbox"/>	2	<input type="checkbox"/>	C09867
<input type="checkbox"/>	3	<input type="checkbox"/>	D05678



12. When you have added all the parts that you want from your Parts List, click the **Exit** icon.

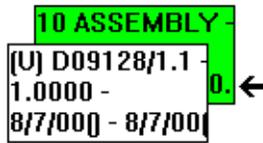
The Import from Drawing window closes and your part selections are displayed in the Manufacturing window.

Adding Manufacturing Legs

You can also add a new manufacturing leg using the Import from Drawing window in VISUAL Enterprise.

1. Click on the Operation Card to which you want to add the manufacturing leg.

An arrow is displayed next to the operation card you selected.



- In the Import from Drawing window, select the check box in the Leg column for the part you want to add.

A check is displayed in the row header for the part you selected, indicating you have made a change to that part.

Eng By: <input type="text"/>				
	Added	Ref	Leg	Part ID
	<input type="checkbox"/>	1	<input type="checkbox"/>	B01234
✓	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	C09867
	<input type="checkbox"/>	3	<input type="checkbox"/>	D05678
	<input type="checkbox"/>	4	<input type="checkbox"/>	0900-784

- Click the row header for the row you selected to add.

The row header is highlighted.

Eng By: <input type="text"/>				
	Added	Ref	Leg	Part ID
	<input type="checkbox"/>	1	<input type="checkbox"/>	B01234
✓	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	C09867
	<input type="checkbox"/>	3	<input type="checkbox"/>	D05678
	<input type="checkbox"/>	4	<input type="checkbox"/>	0900-784
	<input type="checkbox"/>	5	<input type="checkbox"/>	0700-784



- Click the **Add Selected** toolbar button.

The part you selected to add as a leg is displayed in the Manufacturing window as a manufacturing leg card.



If any part does NOT exist in your VISUAL database, you are prompted to create a new part.

If you do NOT want to create a new part, click **No**.

An error message is displayed notifying you that VISUAL is unable to save the material to the master. The Import from Drawing window is displayed so you can continue to build your master.

If you want to create a new part, click **Yes**.

The New Part dialog is displayed. The Description field is automatically populated with the information from the row item in the Import from Drawing window.

If you want to change the description, click in the Description field and make any appropriate changes.

Caution: If you change the description of your new part to something different than the description in your DesignLink Parts List, you will NOT maintain data integrity with your drawings.

Select the Fabricated, Purchased and/or Detail Only check boxes that apply to this part and click **OK**.

The selected part is added to the Manufacturing window as a material card.

As you add leg header cards, the card is also populated with any existing part information from your VISUAL database.

Note: You cannot add some of your part information to your VISUAL database using the Manufacturing Window.

For more information on creating new parts, see your VISUAL documentation.



5. When you have added all the legs that you want from your parts list, click **Exit**.

The Import from Drawing window closes and your part selections are displayed in the Manufacturing window.

Editing the Import from Drawing Window

If you want to make changes to your imported part information you can do so using the Import from Drawing window.

Caution: If you make changes to the information in the Import from Drawing window and apply those changes to your master/work order, you will NOT maintain data integrity with your drawings.

For example, you may need to change the quantities of one of the parts listed in the window.

To make any changes to the information in the Import from Drawing window, click on the information you want to change and make any appropriate changes you want.



When you add a changed part to the Manufacturing Window using the **AddSelected** button, or update a part already existing in the Manufacturing Window using the **Update Selected** button, the changes are displayed in the appropriate information card.

Refreshing Information



If you want to refresh the information in the Import from Drawing window from your original Import file, click **Refresh**.

The information is updated in the Import from Drawing window from your original Import file. This is particularly helpful if you want to revert back to your original imported file information after you have completed your editing.

Updating Information

If you want to update the information in your VISUAL database, and the current open engineering master or work order, with the current information in the Import from Drawing window:

1. Click the row header for the row you want to update.

The row is highlighted.



2. Click **Update Selected**.

For example, if you have made any changes to information in the window and want those changes to display in the window and be saved to your VISUAL database, use the **Update Selected** button.

VISUAL updates your database with the current information from the open Import from Drawing window.

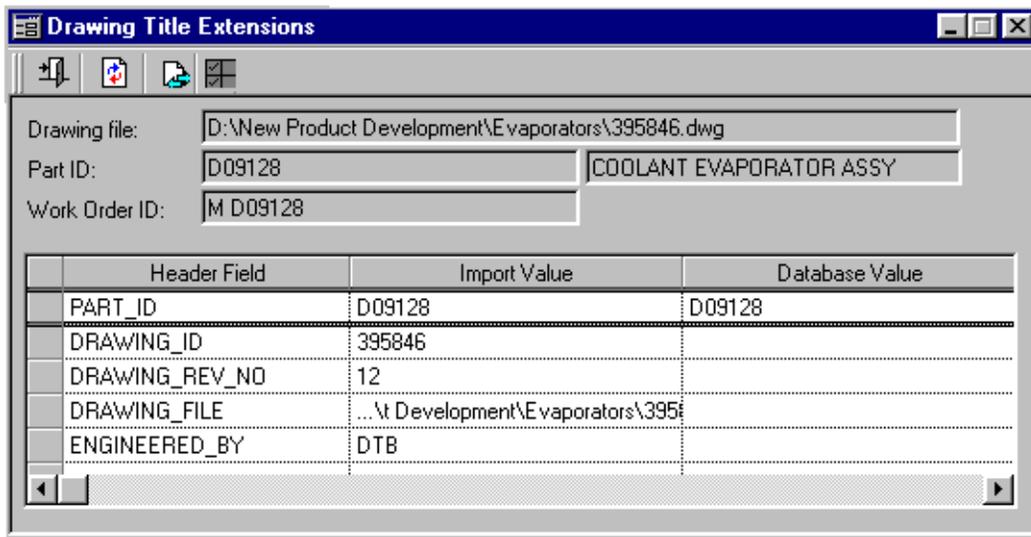
Updating the Main Header

Using the Update Header window you can save your Title Extension information to your VISUAL database.



1. Click the **Update Header** toolbar button.
-

The Drawing Title Extensions window is displayed.



Your drawing Title Extension information is displayed in the Import Value column and your VISUAL information is displayed in the Database Value column.

2. Compare the Title Extension information from your drawing with the information in your VISUAL database.

If you want to change the information in the Import Value column, click on the appropriate information and make any changes you want.

Caution: If you make changes to the information in the Drawing Title Extensions window and apply those changes to your master/work order, you will NOT maintain data integrity with your drawings.

-  When you have finished comparing and/or changing the header values and you want to update the highlighted rows, click the **Update Selected** toolbar button.

VISUAL updates your database with all the current information you selected from the open Import from Drawing window.

-  When you have finished comparing and/or changing the header values and you want to update all your VISUAL information, click the **Update All** toolbar button.

VISUAL updates your database with all the current information from the open Import from Drawing window.

-  If you have made changes to the information in the Drawing Title Extensions window and you want to revert back to the original file information, click the **Refresh** toolbar button.

Header information from your original export file is displayed in the Drawing Title Extensions window.

-  3. When you have finished updating your database and export file information, click the **Exit** toolbar button.

The Drawing Title Extensions window closes.

Using Exported Text

DesignLink also exports any text or attributed text you place in your AutoCAD drawing. These texts may contain information such as process notes, part specifications, vendor notes etc. Using the Drawing Attributes window you can use this information in your VISUAL Engineering Masters and Work Orders.

If you use “attributed text” in your AutoCAD drawing, that text will be easier to locate in the Drawing Attributes window.

To import additional information from your drawings into your engineering masters or work orders:



1. In the Import from Drawing window, click **Attributes**.

The Drawing Attributes window is displayed.

Name	Data
NOTE	1. ASSEMBLE EVAPORATOR ASSY PER E.S. 103.
NOTE	2. PACKAGE PER CUSTOMER PROFILE REQUIREMENTS
ENGINEERING_SPEC	MUST MEET THE TESTING REQUIREMENTS SET FORTH IN 649
PROCESS	CUSTOMER APPROVAL REQUIRED ON ALL OUTSIDE SERVICES
APPROVED_BY	JRC
SCALE	1 : 1
TEXT1	TOLERANCES UNLESS OTHERWISE SPECIFIED

2. Click the row header of the information you want to use in your engineering master or work order.

The row is highlighted.

Name	Data
NOTE	1. ASSEMBLE EVAPOF
NOTE	2. PACKAGE PER CUS
ENGINEERING_SPEC	MUST MEET THE TES
PROCESS	CUSTOMER APPROVA
APPROVED_BY	JRC



3. Click the **Copy** toolbar button.

The selected information is copied to your Windows clipboard.

4. Select where you want to Paste the selected information.

You can paste your drawing information to any field in VISUAL that allows manual data input. For example, you can paste your drawing information into any Specifications section.

5. Press the SHIFT+INSERT keys to paste your drawing information to the location you want.

The information you paste is displayed in the location you selected.

6. If you want to change the information in the Data column, click on the appropriate information and make any changes you want. You may now copy and paste the modified information into any manual input field in VISUAL.

Caution: If you make changes to the information in the Drawing Attributes window and apply those changes to your master/work order, you will NOT maintain data integrity with your drawings.



7. If have made changes to your file information in the Drawing Attributes window and you want to revert back to the original exported file information, click the **Refresh** toolbar button.

Your original exported file information is displayed in the Drawing Attributes window.



8. When you have finished copying and pasting information from your drawing to your VISUAL database, click the **Exit** toolbar button.

The Drawing Attributes window closes.

Follow the instructions for the type of problem you encounter.

Problem	Possible Cause	Remedy
Missing DesignLink menu or toolbar.	<ol style="list-style-type: none">1. ACAD.LSP missing or moved.2. Binary or Compiled ACAD (ACAD.MNS or ACAD.MNC) have changed.	<ol style="list-style-type: none">1. Consult your installation guide.2. Consult your AutoCAD® documentation regarding how to display toolbars and menus.
Cannot connect to database to Browse and retrieve into the AutoCAD environment. This message may be displayed: “Operation is not allowed on an object referencing a closed or invalid connection.” “The connection cannot be used to perform this operation. It is either closed or invalid in this context.”	<ol style="list-style-type: none">1. Misspelled data source name.2. You have specified the database name instead of the DSN name.3. Database name required for desktop installation.4. ODBC connection not correctly set up or is missing.	<ol style="list-style-type: none">1. Check spelling during database login procedure.2. Specify the correct DSN name for the data source.3. Verify data source name.4. Set up you ODBC connection properly or consult your system administrator.
DesignLink object does not appear on your screen when you insert it into the drawing.	Current Layer is hidden or frozen.	Change the status of the current layer on which the DesignLink object resides or Change the properties of the DesignLink object to a different layer that is not hidden or frozen.
IV. Balloons are not updated with changes to your Parts List.	Balloons are not DesignLink objects. Balloons must be created using the DesignLink Balloon function.	Erase problem balloons. Re insert balloons using the DesignLink Balloons function.

Problem	Possible Cause	Remedy
V. A new email message does not open when you run the vmsend command.	Email application is not open, loaded, or configured on your computer.	Refer to your system administrator for the correct email setup.
VISUAL window does not open when you run the vmrun command.	DesignLink Export files (.VMX and .XML) not configured as a file type on your computer. For information on assigning file type associations, refer to your Windows documentation.	
When you select a toolbar or menu command, you receive the following message: “Unknown Command.”	You have not loaded the ARX file.	From the Tools menu, select Load Application. Make sure that the file part for your ARX file appears in the options support path file screen.

Valid VISUAL Field Tag Names

Following is a list of valid VISUAL field tag names you can use in DesignLink:

BURDEN_PER_UNIT	QTY_PER_TYPE
BURDEN_PERCENT	REFERENCE
COMMODITY_CODE	REQUIRED_DATE
DEF_LBL_FORMAT_ID	REQUIRED_FOR_SETUP
DESCRIPTION	SCRAP_PERCENT
DESIRED_QTY	SPECIFICATION
DESIRED_RLS_DATE	STATUS
DESIRED_WANT_DATE	STOCK_UM
DIM_EXPRESSION	UNIT_BURDEN_COST
DIMENSIONS	UNIT_LABOR_COST
DISCONTINUE_DATE	UNIT_MATERIAL_COST
DRAWING_FILE	UNIT_SERVICE_COST
DRAWING_ID	USAGE_UM
DRAWING_REV_NO	USER_1
EFFECTIVE_DATE	USER_2
ENGINEERED_BY	USER_3
ENGINEERED_DATE	USER_4
FIXED_COST	USER_5
FIXED_QTY	USER_7
FORWARD_SCHEDULE	USER_6
HARD_RELEASE_DATE	USER_7
HEIGHT	USER_8
LENGTH	USER_9
MFG_NAME	USER_10
MFG_PART_ID	VARIABLE_TABLE
PART_ID	VENDOR_ID
PLANNING_LEADTIME	VENDOR_PART_ID
PRODUCT_CODE	WAREHOUSE_ID
PROTECT_COST	WIDTH
QTY_PER	WIP_VAS_REQUIRED

Index

A

- Adding Manufacturing Legs 4–10
- Adding Parts to Your Parts Lists 2–9
- Attributes
 - changing 2–6, 3–6
- AutoCAD Grips 1–5
- AutoCAD Program
 - starting VISUAL 4–5

B

- Balloon Attributes
 - changing 3–14
- Browse Filtering
 - using 2–15, 3–11
- Browsing 2–13, 3–9
- Building Masters and Work Orders from DesignLink Drawing Information 4–6
- Building Parts Lists 2–1

C

- Changing Attributes 2–6, 3–6
- Changing Balloon Attributes 3–14
- Changing the Order of Column Definitions 2–4, 3–4
- Changing the Order of Line Items 2–12
- Column and Row Headers 1–6
- Column Definitions
 - changing 3–4
 - changing the order 2–4
 - deleting 2–5, 3–5
 - editing 2–3, 3–4
- Command Buttons 1–3
- Command Prompt 1–4
- Concepts and Common Features 1–2
- Creating DesignLink Parts Lists 2–9
- Creating DesignLink Title Extensions 3–8

D

- Databases
 - selecting parts 2–17, 3–12
- Deleting Balloons in your AutoCAD Drawings 3–15
- Deleting Column Definitions 2–5, 3–5
- Deleting Line Items 2–13
- Design Center
 - using 3–17
- Design Content
 - saving 4–2
- DesignLink Balloons
 - using 3–12
- DesignLink Menu 1–4
- DesignLink Toolbar Icons 1–5
- DesignLink's Drawing Environment 1–5
- Drawings
 - deleting balloons 3–15
 - moving balloons 3–15

- Drop-down List Boxes 1–3

E

- Editing Column Definitions 2–3, 3–4
- Editing Existing Parts Lists 2–17
- Editing Line Items 2–11
- Editing the Import from Drawing Window 4–12
- Editing Title Extensions 3–9
- E-mailing DesignLink Export Files 4–3
- Export Files
 - e-mailing 4–3
- Exported Text
 - using 4–15

F

- Features and Benefits 1–2

I

- Import from Drawing Window
 - editing 4–12
- Information
 - refreshing 4–13
 - updating 4–13

L

- Line Items
 - changing order 2–12
 - deleting 2–13
 - editing 2–11

M

- Main Header
 - updating 4–13
- Manufacturing Legs
 - adding 4–10
- Masters and Work Orders
 - building 4–6
- Move Buttons 1–6
- Moving Balloons in Your AutoCAD Drawings 3–15
- Multiple Design Environment
 - using 3–16

O

- Option Buttons 1–3

P

- Parts Lists
 - adding parts 2–9
 - editing 2–17
 - setting up 2–2

R

Refreshing Information 4–13

S

Saving Design Content to a File 4–2

Scroll Bars 1–7

Selecting Parts from Different Databases 2–17, 3–12

Setting Up DesignLink Parts Lists 2–2

Setting Up DesignLink Title Extensions 3–2

Sizing Columns 1–6

Starting VISUAL from within the AutoCAD Program 4–5

T

Tables 1–6

Title Extensions

 creating 3–8

 editing 3–9

 setting up 3–2

Troubleshooting and Support 5–1

U

Updating Information 4–13

Updating the Main Header 4–13

Using Browse Filtering 2–15, 3–11

Using Exported Text 4–15

Using the Design Center 3–17

Using the Multiple Design Environment 3–16