



Walt Disney World Swan and Dolphin Resort
Orlando, Florida

No More Excuses! Just Use Dimension Styles

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GD14-1 Not using dimension styles? If dimension styles were as easy to use as text styles, would you be more inclined to use dimensions and not explode them? In this session, we'll review the common excuses for not using dimension styles. We'll cover the basic terminology necessary to navigate the DimStyle dialog box so that you'll feel confident and more productive creating and using your own dimension styles. This class is for everyone from the CADD operator who uses styles on a daily basis, to the CADD manager responsible for creating the styles.

About the Speaker:

Joanne works at RBF Consulting in Irvine, California, where she provides CADD support and training to over 400 CADD users across 13 offices. Prior to joining RBF, Joanne served as director of training for Synergis Technologies in Quakertown, Pennsylvania, developing and delivering AutoCAD courses and providing consulting services for CADD standards development. She is a recipient of Autodesk's Instructional Quality Award, Best New Speaker at AU Award, and has been an Autodesk Certified Instructor since 1992. Joanne's career began in the early 1980s designing newspaper conveying systems.

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Setting Expectations...

GD14-1 No More Excuses! Just Use Dimension Styles

- Class Objectives
- Terminology
- Excuses
- Navigating the Dimension Style Manager
- Creating DimStyles
- Modifying DimStyles
- Modifying Dimensions
- Gotchas, Tips & Tricks
- Version Specific Issues
- Mobilizing DimStyles
- Help Finding Help

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Class Objectives

What this class will do...

- Peel away the mystery of Dimension Style Manager
- Arm the audience with knowledge of how dimension styles behave
- Share tips and gotchas discovered over the years
- Show you where to find answers

What this class will not do...

- Teach you how to dimension
- Teach you how to set each and every dimvar

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Rules of Engagement

- This is YOUR time
 - Let me know if I am going too fast (or too slow)
 - Please hold questions until "Question Time"
 - Relax and absorb as much as you can...I will be available after class for additional questions



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Terminology

A **Dimension Style** is similar to a Text Style in that it is a named object stored within a drawing and it controls the look and feel of dimensions placed in that style.

That number you see is true...32,767!

No one should ever approach the maximum number of dimension styles in any given drawing.

Dimension styles provide the benefit of creating and controlling a standard look for all dimensions across a given drawing or set of drawings. Where we see the most benefit is when changes occur – both geometric changes and annotation type changes (scaling issues, arrowhead choices, tolerancing, etc). Dimension Styles make these changes a breeze!

A “**Dimvar**” is just a shortcut term for a **dimension variable**. Even though there are over 70 dimvars available for each dimension style, you do not have to address every single one. Those that do not apply to your discipline or drawing type can be ignored.

Years ago, Autodesk came up with the “**family**” concept for dimension styles. Within each dimension style family, you have the **parent** style, which stores the master dimvar settings. As **children** are created from the parent, those master settings are copied. In addition, a hierarchical relationship is established so that if any changes are made to the parent style, those changes trickle down and affect the children. This is unidirectional only. Changes made to the children styles **DO NOT** affect the parent.

If you look closely at the list of the 6 possible children styles, they match the different types of dimensions that can be generated on a drawing.

Latest and Greatest Note: AutoCAD 2006 has two new dimension commands – **Arc Length (DIMARC)** and **Jogged (DIMJOGGED)**. The “Linear Child” controls Arc Length dimensions and the “Radial Child” controls Jogged dimensions.

Terminology

What is a Dimension Style?

- A collection of dimension variables stored together with a name inside an AutoCAD drawing
- Can be exported for use in other drawings
- Useless Trivia: Maximum number dimstyles per drawing – 32,767

What are the benefits of using Dimension Styles?

- Dimension values automatically update when geometry changes
- Provides a fast, efficient way to control and modify the look of all dimensions placed on drawing

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Terminology (cont'd)

Dimvar

- Term coined to refer to a dimension variable
- There are over 70 “dimvars” for every dimension style

Family

- Collection of DimStyles that share the same “surname”

Parent

- Master DimStyle that stores dimvars settings, from which all children are created
- Changes to parent affect children

Child

- Created from parent DimStyle
- 6 possible children for each parent (Linear, Angular, Radius, Diameter, Ordinate, Leaders and Tolerances)
- Changes to children DO NOT affect parent

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Excuses

#1 – Although this class will not show you how to set each dimvar, we will review how easy it was to setup the sample DimStyle being used during this presentation.

#2 – Custom arrows are easily applied to a dimension style. We will look at an example.

#3 – The Parent/Child schema allows for a multitude of adjustments.

#4 – This one is so easy to get around. There is a simple setting that can be applied that will suppress extension lines.

#5 – If you draw objects 1:1, the value that appears will be correct. Also, with AutoCAD's new "truly" associative dimensions, the values automatically update when the geometry changes!

#6 – This just doesn't seem possible.



Excuses

1. "It takes too long to make a DimStyle and everybody ends up exploding the dimensions anyway."
2. "We have custom arrows and we don't want to give them up."
3. "DimStyles aren't flexible enough."
4. "I don't always want extension lines, so I have to explode the dimension in order to erase them."
5. "I can never seem to get the value I want on the dimension."
6. "It's just easier to draw a polyline with arrowheads and place a piece of text."

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Navigating the DimStyle Manager




The **Dimension Style Manager** is accessed via the last icon on the Dimensioning toolbar. It has many buttons, bells and whistles that you may not be taking full advantage of.

You can control which dimension styles appear in the list by using the toggles at the bottom. If setting the list to "**Styles in Use**" causes fewer styles to display, this is a good indication that the drawing may need to be purged of unused dimension styles. Additionally, you can display dimension styles that exist within attached xrefs by turning off the "**Don't display styles in xrefs**" toggle. Although those styles cannot be made current, they can be utilized in other ways.

The **Description field** looks static, but is actually dynamic in nature. By default, it lists the differences between the current style and any other style selected from the list. Click inside the field to activate, and use the arrow keys on the keyboard to scroll through the list. In addition, the dialog box can be resized, allowing more text to be displayed.

A **right-click menu** is available that offers tools (Set current, Rename and Delete) relative to the selected style.

The **Compare** feature provides a way to view the differences in dimvar settings between two selected DimStyles. In the Compare dialog box, just select two different styles and their differences will list below. There is a Copy Clip icon  available for those wishing to capture the differences and paste them to a document.

Hint: Here is one way to utilize the dimension styles in xrefs: If you display the dimension styles within the xrefs in the main dialog box, they become available in the Compare box as well!

Navigating the Dimension Style Manager

Controlling the list

- Use toggles at bottom to limit list

Description field

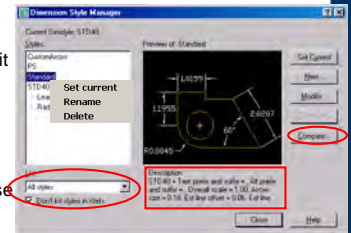
- Lists details of selected dimstyle **relative to current**
- Click to make active, then use arrow keys

Right-click menu

- Set current, Rename, Delete & Save to current style (style overrides only)

Compare

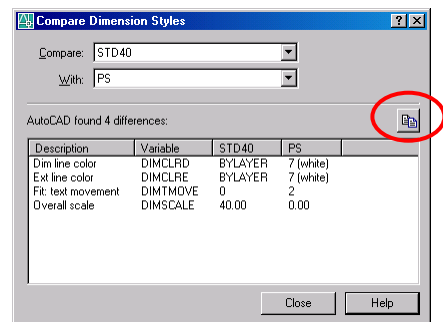
- Lists differences between selected styles



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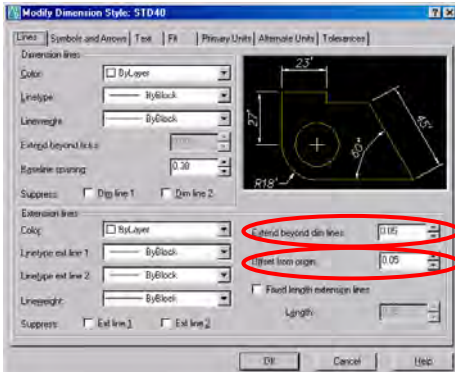
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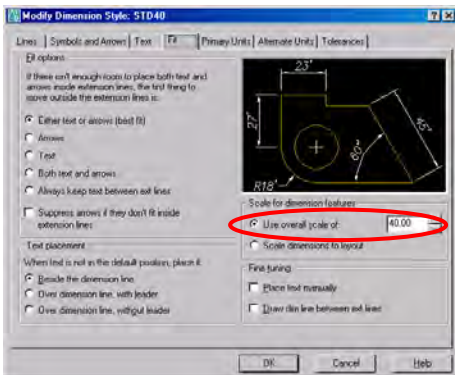
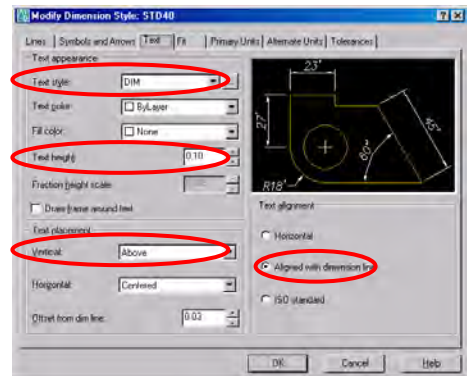
Excuse #1

Let's take a look at how easy it was to set up the DimStyle called STD40. With STD40 highlighted, selecting the Modify button shows all the settings applied to that style, organized on logical tabs.



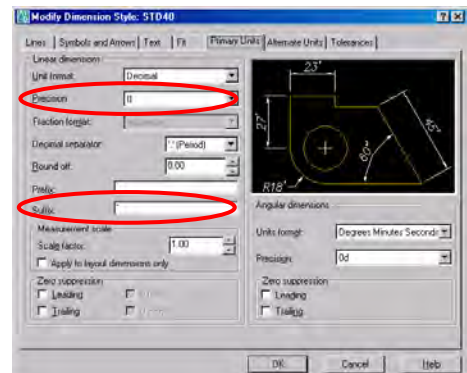
On the **Lines** tab, two values were changed:
 "Extend beyond dim lines" was set to .05
 "Offset from Origin" was set to .05

On the **Text** tab, four values were changed:
 "Text Style" DIM was assigned
 "Text height" was set to .10
 "Text Placement - Vertical" was set to "Above"
 "Text Alignment" was changed to "Aligned with dimension line"



On the **Fit** tab, one value was changed:
 "Use overall scale of" was set to 40

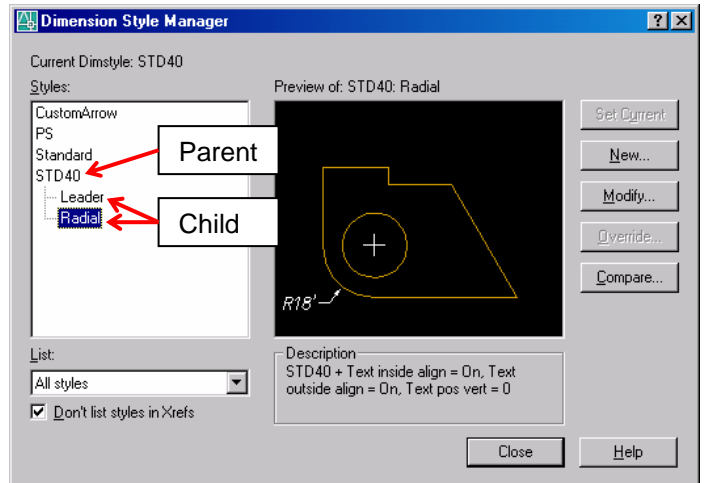
On the **Primary Units** tab, two values were changed:
 "Precision" was set to 0
 "Suffix" was set to ' ' (single quote)



A total of nine settings were adjusted from the Standard DimStyle loaded with AutoCAD!

Parent/Child Relationship

Notice how AutoCAD displays the **Parent/Child** relationship in the list for the STD40 family. STD40 is the parent style for the family. Two children have been created – one for Radial dimensions and one for Leaders. Highlighting the child style causes an example dimension to display in the preview window and the Description field will display the differences between the child and the current style.

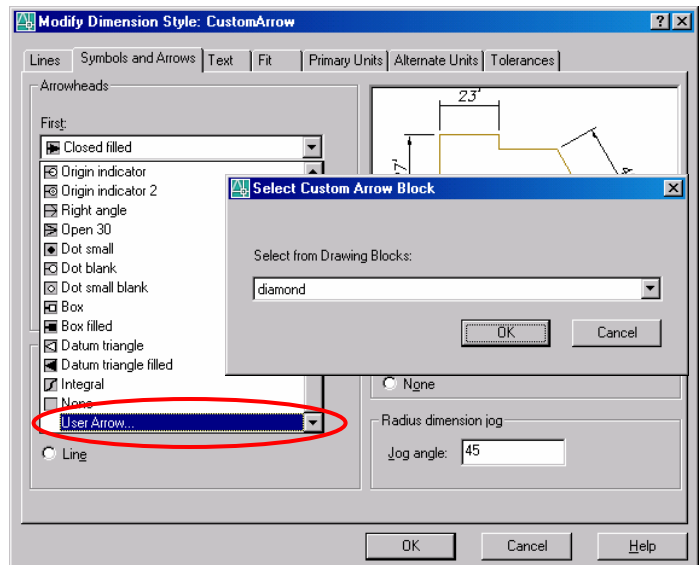


Excuse #2

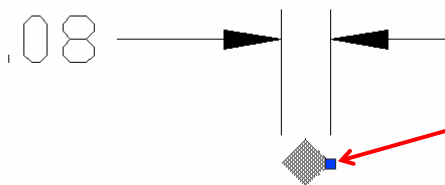
Let's dispel another excuse. There is no reason to give up custom arrowheads. "CustomArrow" is a DimStyle created with a custom arrowhead.

To make this DimStyle:

- Create a block of the arrowhead, exactly "one unit" in length (desired plotted size), with the **RIGHT** end selected as the insertion point.
- On the Symbols and Arrows tab, select "User Arrow"
- Select the name of the custom arrowhead from the list of available blocks.



Diamond Custom Arrowhead Block:



Insertion point defined on right side of block

Creating DimStyles

To create a DimStyle, begin with the **New** button and enter the family name.

Select a style to **Start with** and AutoCAD copies all the settings from that style into the new one.

Finally, we have to tell AutoCAD what this new style will be used for. When creating a brand new style, you **MUST** create the parent first. Therefore, we select **“All dimensions”** from the list.

Creating DimStyles

New Style Name:

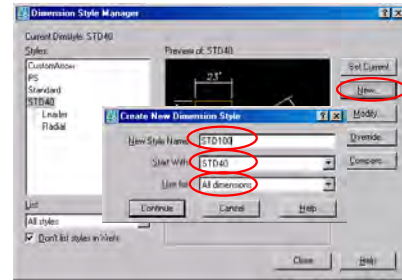
- Enter “surname”

Start With:

- Copies all dimvar settings from selected style

Use for:

- Must create parent first - use “All dimensions”
- Select child category from list
- AutoCAD controls the names of the children



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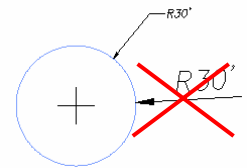
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For this example, we'll create a new style for 100 scale. Therefore, our family name will be STD100. Since everything about the STD40 style is perfect except for the overall scale, we will start with STD40 as our base. Since we are setting up a brand new style, we will create the parent first by selecting “All dimensions”.

All we need to change is the “Overall scale”, so we'll pop over to the Fit tab, change 40 to 100, and pick OK.

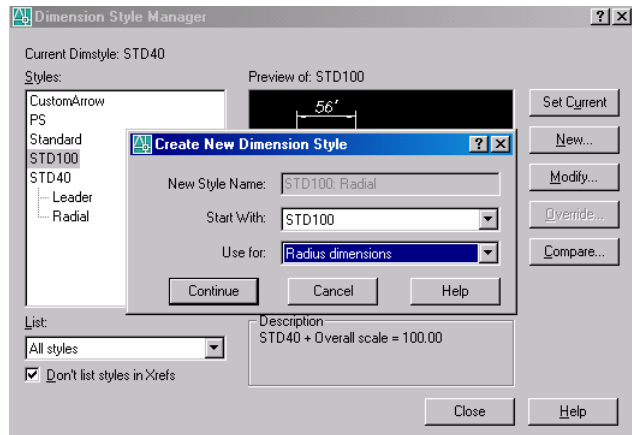
This new style works well for linear dimensions, but not for radius dimensions. The problem is that the text placement is set to “Align with dimension line.” That is how the parent style for STD40 was defined and of course, that setting was mapped across to the STD100 parent. Here is a great example of why we need to make a child style. The majority of the settings in the parent style works well for the radius dimension. However, the text placement is not good.



Excuse #3 – Use Child Styles for Flexibility!

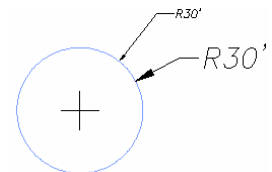
Let's make a child style for radius dimensions. Select the New button. Now, here's a spot where you can get frustrated - don't bother trying to give the child style a custom name. AutoCAD controls the names of the children. Leave the “Start with” field set to STD100, and choose Radius Dimensions from the “Use for” list. See what AutoCAD did? It automatically named the child style to exactly what it wanted. So don't waste your time. Just let AutoCAD do the naming for you. Simply select the “Start with” family name and the “Use for” child name.

Select Continue and we are given the opportunity to alter the style. In our example, we need to tweak two settings – the Vertical Text Placement should be “Centered” and the Text Alignment should be “Horizontal”. As we select OK, the child appears in the list below the parent. As we leave the DimStyle Manager, one of the benefits of using Dimension Styles is made clear. All existing the radius dimensions automatically update to reflect the change in our settings.



Why have children?

Creating child styles from the parent keeps all settings the same initially, but allows for adjustments to accommodate a given type of dimension (e.g., forcing dimension text to horizontal read for radius dimensions). Without child styles, you would have to create a different style for every possible type of dimension. This would be cumbersome to manage.



Two Most Important DimVars

As stated earlier, the agenda for this class does not include how to set every individual dimension variable (that would take all day!). However, there are two dimvars that should be discussed, as they are the most important of all.

DIMSCALE

DIMSCALE is controlled on the Fit tab via the “Scale for Dimension Features” settings. The number entered here controls ALL size-related dimvars in that style – settings like arrowhead size, text height, and offset distances for extension lines. Each individual setting is multiplied by the scale factor entered. This makes controlling all size settings in a style seamless. Remember how quickly we were able to create the STD100 style from the STD40 style? This is the power of DIMSCALE.

If dimensioning in model space, this should be set to the same value as your horizontal (viewport) scale.

If dimensioning in paper space, use “Scale dimensions to layout”. Using this setting allows you to add dimensions both on the layout as well as through a viewport into Mspace. This option automatically senses where you are dimensioning and adjusts the DIMSCALE variable accordingly. If you are in layout, it sets DIMSCALE to 1; if you are in Mspace, it sets DIMSCALE to the scale of the active viewport.

DIMASO\DIMASSOC

In AutoCAD 2000i and older versions, **DIMASO** controls the associativity of dimensions. Starting with AutoCAD 2002, Autodesk gave us **DIMASSOC** to control associativity.

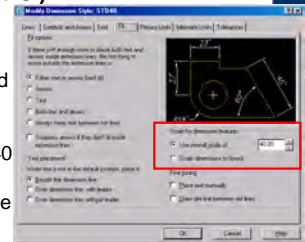
In 2000i and older versions, DIMASO should be set to 1 so that the dimension is one object. In these earlier versions, if you include the dimension in the editing process along with the geometry, the value will update. If DIMASO is set to 0, all dimensions added to the drawing are exploded upon insertion, i.e., separate pieces of lines, arrowhead and text that have no long-term relationship with the objects being dimensioned.

In 2002 and above, DIMASSOC should be set to 2 in order to take advantage of true associative dimensioning, i.e., when the geometry changes, the dimension automatically updates. Even if that geometry is located within an XREF! If DIMASSOC is set to 1 or 0, dimensions behave as if they were being controlled by the DIMASO variable settings noted above.

Creating DimStyles (cont'd)

DIMSCALE

- Overall scale that controls all size-related dimvars
- If dimensioning in model space, set this value equal to the horizontal scale (ex: 40 for a 1:40 scale drawing)
- If using multiple scales, create a separate DimStyle for each scale.
- If dimensioning in layout, use “Scale dimensions to layout (paperspace)” – DIMSCALE=0



DIMASO/DIMASSOC

- Controls associativity of dimensions (0=OFF, 1 or 2=ON)
- DIMASSOC available via Options->User Preferences
- DIMASO(pre-2002) **must be typed at command prompt**

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Modifying Dimensions

One option available for modifying a dimension directly is the **Properties** command. Properties provides access to all the same variables located in the Dimension Style Manager, but only for the dimension(s) selected.

When a dimension is selected with Properties, notice how the names of the tabs are similar to those found in the Dimension Style Manager.

If right-click menus are enabled, you can also affect certain settings of selected dimensions. The list of choices is indeed limited, but it does provide a fast way to change a dimension directly.

Latest and Greatest Note: AutoCAD 2006 has a new right-click option called "Flip Arrow." Select the dimension so that the grips are showing (do not select a grip!). Place the cursor near the arrow that you want to flip, right-click, and select **Flip Arrow**. Each arrow must be flipped separately.

When changes are made to a dimension via either the Properties command or the right-click menu, overrides are attached directly to that dimension. The **LIST** command displays the information regarding the overrides.

Another fast way to change dimensions is with **Match Properties**. Just make sure your "Special Properties" are turned on for Dimensions in the Settings dialog box.

Joanne's Opinion:

Most often, it is easier to make "override" adjustments directly on the dimension(s) instead of trying to setup overrides through the Dimension Style Manager.

Modifying Dimensions

Properties

- Creates override(s) for selected dimension(s)
- Categories similar to tabs on DimStyle Manager

Right-click menu

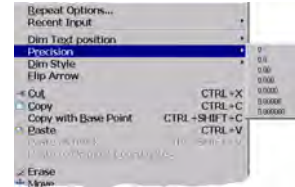
- Creates override(s) for selected dimension(s)

Match Properties

- Applies all DimStyle settings of one dimension to others

Joanne's Opinion:

- It's easier to modify the dimensions directly, than to create a DimStyle Override!

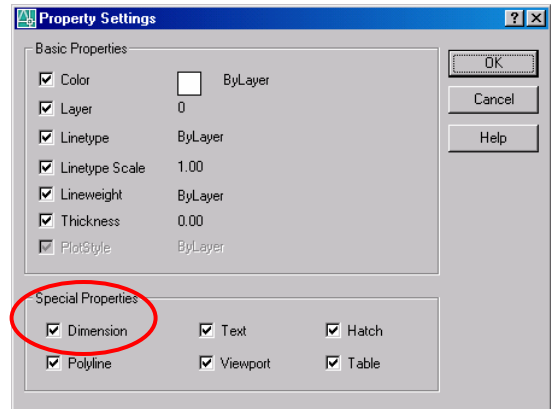
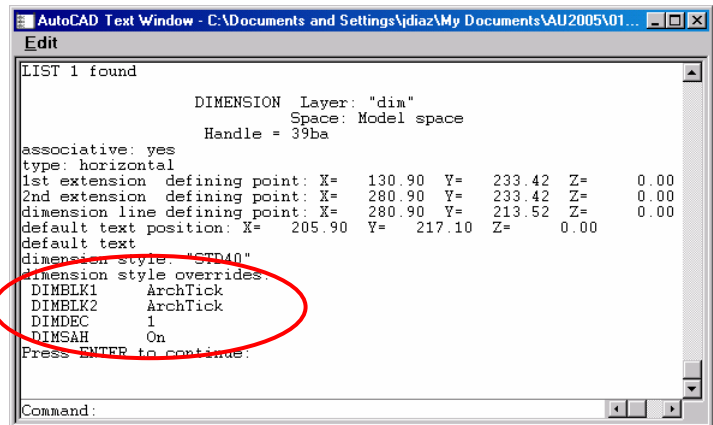


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Modifying Dimensions

DIMUPDATE & DIMREGEN

The **DIMUPDATE** command is a quick way to change a group of dimensions from whatever style they are in to the *current style*.

DIMREGEN was introduced in AutoCAD 2002. Since AutoCAD 2002 brought truly associative dimensions (**DIMASSOC=2**) to the table, **DIMREGEN** became necessary to ensure that the dimensions updated at all times. There are a number of reasons when **DIMREGEN** may need to be invoked. There is no menu pick for this command, it must be typed at the command prompt.

Modifying Dimensions (cont'd)

DIMUPDATE

- Updates selected dimensions with the settings of the **current** DimStyle

DIMREGEN (2002+)

- Use after panning or zooming with a wheel mouse in layout with model space active to update associative dimensions
- Use after opening a drawing that has been modified with a previous version of AutoCAD to update associative dimensions
- Use after opening a drawing containing xrefs that are dimensioned in the current drawing to update associative dimensions*
- **Must be typed at command prompt**

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***Note: In-place XREF editing (REFEDIT) causes associative dimensions (DIMASSOC=2) to update automatically – no DIMREGEN necessary!**

DIMREASSOCIATE

There are a few more dimension-related modify commands that were introduced in AutoCAD 2002.

DIMREASSOCIATE adds associativity to non-associative dimensions. There are number of applications for this new command. First, let's review what we mean by associativity.

When an object is gripped (and ONLY the object, no dimensions) and stretched to a new size, the dimension will update. That represents a truly associative dimension (2002+).

When working in AutoCAD 2000i or prior, the dimension would not have changed. The dimension would have to be included in the editing process in order for it to update.

Even with the new truly associative dimensions, there are some limitations. For example, if a dimensioned rectangle is exploded, the link between it and its dimensions is lost. The dimension(s) will not update automatically because the object that it was linked to - the rectangle - has been altered significantly.

This is a good time to use **DIMREASSOCIATE**. Use this tool to re-associate the dimension to the altered line work and the dimension will now react to any changes made to that geometry in the future.

DIMDISASSOCIATE

DIMDISASSOCIATE is also available (via the command prompt only) in case you want to remove the new truly associative qualities from a dimension. Using this command on a dimension is equivalent to setting **DIMASSOC=1**, which is also equivalent to **DIMASO=1**.

An example of when you may want to use this command is when you are supplying drawings to people using AutoCAD 2000i or prior versions. If you do not remove the new "truly" associative quality from the dimensions, the receiver will get proxy objects upon opening the file.

Modifying Dimensions (cont'd)

DIMREASSOCIATE (2002+)

- Redefine the associativity of dimensions in drawings that have been edited significantly
- Add associativity to dimensions that have been partially disassociated.
- Add associativity to dimensions in legacy drawings
- Available via Dimension pulldown

DIMDISASSOCIATE (2002+)

- Converts associative dimensions into non-associative (pre-2002)
- Use when providing drawings to people using prior releases of AutoCAD (pre-2002) who do not want proxy objects in the drawings
- **Must be typed at command prompt**

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Gotchas, Tips & Tricks

No software is perfect. Let's look at some of those Gotchas, Tips & Tricks that will hopefully save you time and reduce frustration...

When creating a dimension style, **ALWAYS** assign a **text style with a 0" height** assignment. If you assign a text style that has any other value, AutoCAD treats that as an absolute value. Therefore, AutoCAD ignores the **DIMSCALE** multiplier and is unable to enlarge the text within the dimension. This can be resolved quickly by simply changing the text height within the assigned text style to zero.

The **units** of the drawing do not control the display of the dimensions. Unit display is controlled within each DimStyle, via the **Primary Units** tab.

The beauty of the <>

In versions prior to AutoCAD 2006, the "default brackets", <>, automatically appeared within editing tools (e.g., DDEDIT) as a placeholder for the true value of the dimension. Additional notes could be added either before or after the <>, and the true value was respected.

Now, in AutoCAD 2006, the real dimension value is displayed within DDEDIT, highlighted in a purple shade, which protects the value from edits. The cursor appears at the beginning of the string, where a note can be added. Or it can be moved to the end of the string, where additional notes can be added.

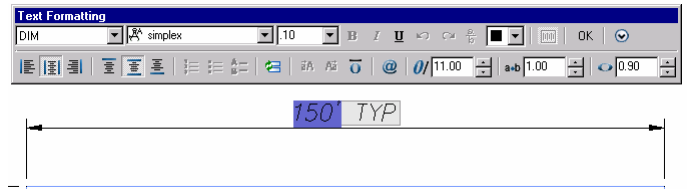
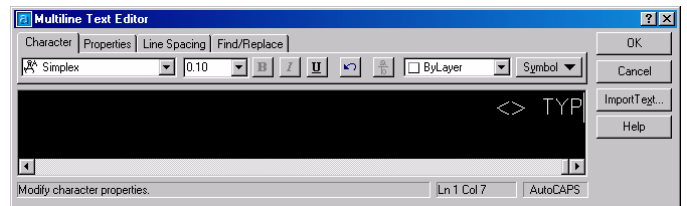
Gotchas, Tips & Tricks

- Always assign a **text style with a 0" height** to your dimension styles for predictable results
- The UNITS of the drawing have absolutely no bearing on the display of dimensions
- The beauty of the <> and the X
- If a child has been created with dimvar "x" set differently than the parent, future changes to the parent's dimvar "x" will not affect the child
- Associativity is NOT maintained between a dimension and a block if the block is redefined; use DIMREASSOCIATE to correct

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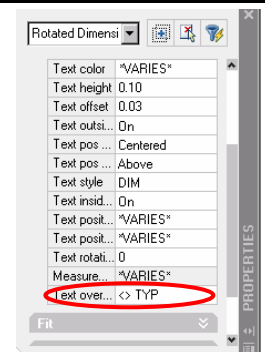
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Be careful! It is possible to overtype the true dimension value. If you pick directly on the purple shaded value, AutoCAD will change its color to green and allow you to completely overwrite the true value.

Regardless of version, overtyped values can be corrected by replacing those values with the <> brackets within the editor. If you have more than one dimension that needs correcting, you can use the **Properties** command. Select all the dimensions, go to the Text category and in the "Text Override" field, enter the default brackets <> and press **Enter**.

Additionally, the process stated above can be used to add notes to an existing dimension. Simply add the note after the default value or <>. Multiple dimensions can be altered in this fashion using the **Properties** command. Select all the dimensions, go to the Text category and in the "Text Override" field, enter the default brackets and the additional note (e.g., TYP), press **Enter** and all the dimensions will maintain their individual default values, with the appended note.

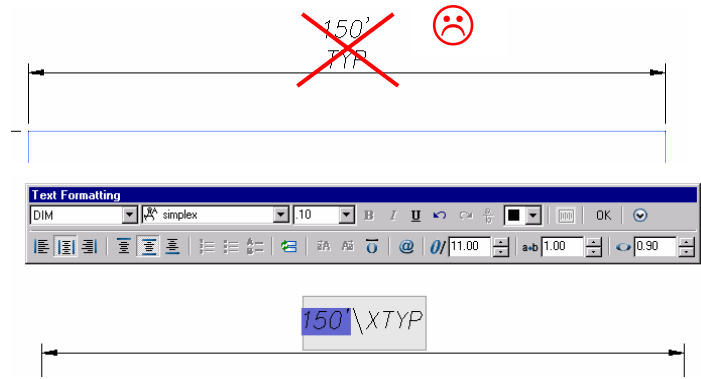


Gotchas, Tips & Tricks

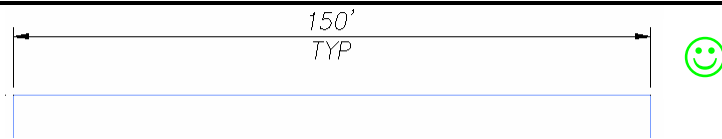
The beauty of the \X

What if we wanted the "TYP" note below the dimension text? If a carriage return is added within the editor, AutoCAD stacks the dimension and its note *above* the dimension line.

What we really want is for those two pieces of text to straddle the dimension line – one above and one below. That is where the "\X" comes into play. The \X is a paragraph marker that tells the dimension to stack the text properly.



Note: You must enter the string exactly as you see it here... "Backslash (UPPERCASE) X". Otherwise it will not work!



Parent vs. Child Dimvars

If a child style's dimvar has been set differently from the parent's, future changes to the parent's dimvar will not affect the child. For example, let's say you change text color of the Radial child style within the STD40 family. Naturally, only the radius dimensions change. If after the fact, the text color for the Parent style (STD40) changes, the text color for the Radius dimensions **will not be** affected. The child style's text color dimvar was changed separately from the parent. Therefore, any changes to the parent's text color will not affect the child.

DIMREASSOCIATE and Redefined Blocks

If you have dimensioned to a block, and that block gets redefined, the associativity of the dimension can be lost. DIMREASSOCIATE must be used in to correct the situation.

Latest and Greatest Note: AutoCAD 2004 and AutoCAD 2005 respect the REFEDIT command and will maintain the associativity between the block and the dimension. AutoCAD 2006 does not. **DIMREASSOCIATE** must be used in AutoCAD 2006 to re-establish the dimension after the block is redefined.

Child Style ID Numbers


Here is a list of how AutoCAD sees the children styles "under the hood." Even though they go by name in the Dimension Style manager, AutoCAD keeps track of them by number, in all other areas of the program (e.g., the LIST command).

AutoCAD lists individual child styles with their respective "Dollar Sign Number" names. These numbers are consistent across all drawings and versions of AutoCAD.

Housecleaning

When it is time to clean up unused dimension styles (Purge), please note that families are considered nested items. Therefore, you must get rid of the children first, and then you can remove the parent.

Gotchas, Tips & Tricks (cont'd)

- AutoCAD creates ID numbers for children styles:
 - Name\$0 – Linear dimension style
 - Name\$2 – Angular dimension style
 - Name\$3 – Diameter dimension style
 - Name\$4 – Radius dimension style
 - Name\$6 – Ordinate dimension style
 - Name\$7 – Leaders and Tolerances dimension style
- In order to delete a DimStyle family, you must delete the children first, then the parent. If using Purge, these are considered nested items.
- DIMEDIT (Dimension Edit) solves a lot of problems! 
 - Use Home option for post grip-edited problems
 - Use Rotate option for DVIEW-twisted drawings*

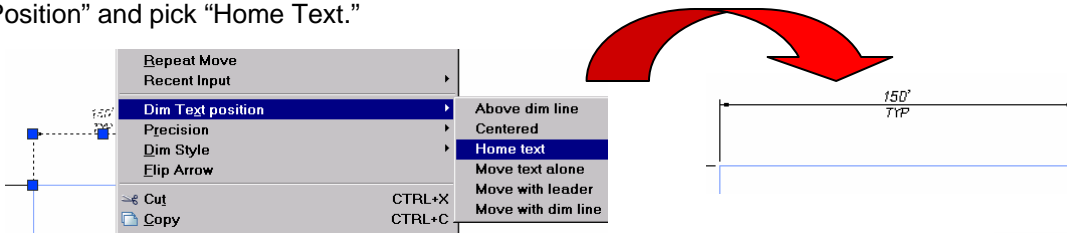
DIMEDIT

DIMEDIT (Dimension Edit) is a great tool for fixing dimensioning problems. There are two examples to share.

First, when you want to relocate a dimension, always use the grip location for the dimension line. This will produce very predictable results. If instead, you select the grip location for the dimension text, the text location will more than likely shift on you.



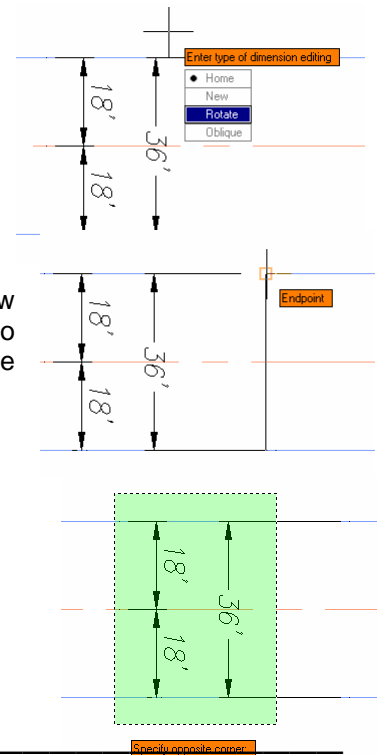
If you come across the situation where the stacked text has shifted above the dimension line, use **DIMEDIT**. The DIMEDIT command has a “Home” option that instructs the text to go back to its original location. If you have right-click menus enabled, an even faster way to correct this is to select the dimension, right-click, go to “Dim Text Position” and pick “Home Text.”



Dview-Twisted Drawings

Another reason to use **DIMEDIT** is to correct dimension text orientation in a Dview-Twisted drawing. Drawings in these conditions can cause dimensions to read from the left, instead of from the right. To correct this problem, select the DIMEDIT command and toggle to the **Rotate** option.

This option needs to know how much to rotate the text. Since we typically don't know the exact angle, nor would we want to key it in anyway, we can simply pick two points vertically on the drawing (using OSNAPS of course!) and let AutoCAD figure out the angle of rotation.



Select the dimensions to be rotated and press **Enter**.

Version Specific Issues (FYI)

Release 14

For those of you on Release 14, the DimStyle Manager looks quite different. The family tree is listed in a more static way with radio buttons. To access any of the children's settings, toggle the radio buttons first.

Note: The presence of a plus sign “+” in front a dimension style name indicates that the style has Overrides!

AutoCAD 2000-2000i

Autodesk redesigned the DimStyle Manager in AutoCAD 2000 and it has not changed since.

AutoCAD 2002-2006

As discussed earlier, for those of you on AutoCAD 2002 and above, you now have truly associative dimensions thanks to the new DIMASSOC variable. The settings are listed for you here. Of course, with the new associativity setting comes additional related commands such as DIMREGEN, DIMREASSOCIATE and DIMDISASSOCIATE.

Note: By default, all drawings created prior to AutoCAD 2002 will have a DIMASSOC setting of (1) - this is **NOT** truly associative dimensioning!

You can force AutoCAD 2002-2006 to automatically turn DIMASSOC to 2 in ALL drawings, both old and new. Simply place the following line of code...

(setvar “DIMASSOC” 2)

...in your respective “acad doc lisp” file (see list below).

In addition, you can cause AutoCAD to force a DIMREGEN on all drawings upon open to guarantee that everything is refreshed properly. Again, place the following line of code...

(command “DIMREGEN”)

...in your respective “acad doc lisp” file (see list below).

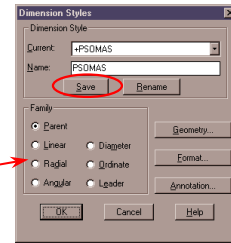
All “acad doc lisp” files are located within the Support folder of the AutoCAD installation folder.

- AutoCAD 2002 - acad2000doc.lsp
- AutoCAD 2004 - acad2004doc.lsp
- AutoCAD 2005 - acad2005doc.lsp
- AutoCAD 2006 - acad2006doc.lsp

Version Specific Issues

R14

- Must use the **Save** button to avoid Overrides!*
- Access children via radio buttons



2000

- Dimension Style dialog box redesigned
- Children listed in tree view below parent



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Version Specific Issues (cont'd)

2002+

- DIMASSOC introduced
 - Controls associativity, replaces DIMASO
 - 2=True associative dimensions
 - 1=Non-associative dimensions (like DIMASO=1)
 - 0=Exploded dimensions (like DIMASO=0)
 - Not stored within dimension style
 - Available via Options->User Preferences
 - **Caution:** DIMASSOC takes on the value of a legacy drawing's DIMASO setting

- DIMREGEN, DIMREASSOCIATE, DIMDISASSOCIATE

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Version Specific Issues (FYI)

AutoCAD 2000-2004 Naming Conventions

During the process of dismissing Excuse #4, we created a new DimStyle based on an existing one and modified a few settings. The existing one we copied had children. In the process of making the new style, the children remained behind with their original parent. That is the expected (desired) behavior.

In AutoCAD 2000-2004, if a new DimStyle was created from an existing one with children, and the name of the first style was used as a prefix for the name of the second one, the children **MOVED** to the new family! This was caused by the use of either a DASH or a SPACE after the prefix. To avoid this problem, use an **UNDERSCORE** as the delimiter.

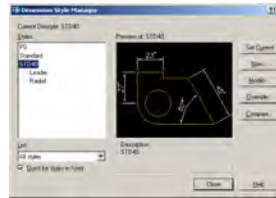
Example: STD40_NoExtLines

Version Specific Issues (cont'd)

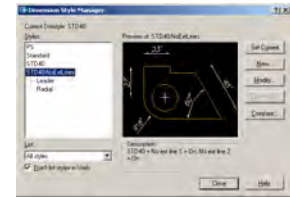
Applies to AutoCAD 2000-2004 only!

If you plan on having a consistent naming convention for your dimension styles, be very careful!

When you create a new DimStyle from an existing one that contains children, and you use the entire name of the existing one as a *prefix* for the name of the new one, AutoCAD will **MOVE** the children to the new DimStyle.



BEFORE



AFTER

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AutoCAD 2005 - Text Fill Color

AutoCAD 2005 added the DimStyle option of applying a text fill behind the dimension text to act as a mask color.

AutoCAD 2006 – Arc Symbol Location

AutoCAD 2006 has a new dimension command called “Arc Length”. In order to accommodate control over this new command, there is a new Dimvar on the **Symbols and Arrows** tab called “**Arc Length Symbol**”.

Another new dimension command in AutoCAD 2006 is called “Jogged”. It makes it easy to specify the radius of an arc whose center is far away from the view. The new related dimvar “**Jog angle**” is located on the **Symbols and Arrows** tab.

The **Lines** tab now has a new option called “**Fixed length extension lines.**” The Length setting specifies how far the line reaches from the dimension line toward the dimensioned object.

The **Lines** tab also has an option to apply **linetypes** to both dimension lines and extension lines (great for centerlines!).

Version Specific Issues (cont'd)

2005

- New DimStyle Option
 - Text Fill Color (Masking)

2006

- New DimStyle Options
 - Arc Length Symbol Location
 - Radius Dimension Jog Angle (Large Radial Dimensions)
 - Fixed Length Extension Lines
 - Dimension & Extension Line Linetype Control

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Help Finding Help

AutoCAD's help system has come a long way. There is an abundance of information to be found within.

If you simply type "Dimension" in the search field, you will get more information than you want and it becomes overwhelming to sift through it all.

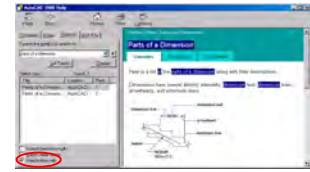
The **Search** tab is useful in that it allows you to fine tune your search. From the Search tab, set your option at the bottom to **"Search Titles Only."**

Here are some key help screens to get you started. They provide valuable input when attempting to understand dimension styles:

Help Finding Help

AutoCAD Help

- Search tab
- "Search Titles Only"



Autodesk Knowledge Base

www.autodesk.com

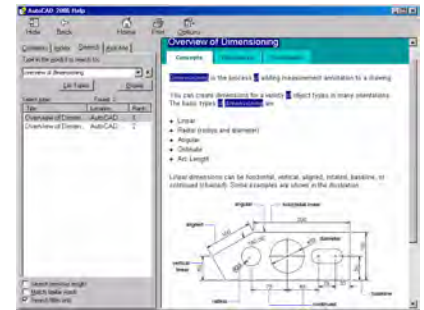
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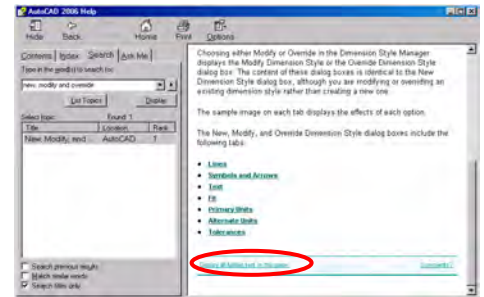
"Overview of dimensioning"

Type in this phrase and press the Enter key to begin the search. Double-click on the first one listed to see AutoCAD's definition for various dimension types.



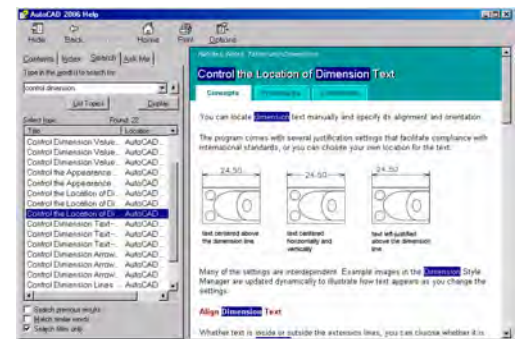
"New, Modify and Override"

This topic breaks down each tab of the Dimension Style Manager. As it discusses the various settings, it also includes the related DimVar. Use the **"Display all hidden text on this page"** toggle to show the details of each tab.



"Control Dimension"

This search criterion provides a list of topics related to controlling the various aspects of dimensions. From unit type, to extension lines, to arrowheads, this is a good general area to look through. With 22 different topics to choose from, you are bound to find some good info!



Autodesk Knowledge Base

Autodesk's on-line **Knowledge Base** can be quite helpful as well. In AutoCAD 2006, the Help pulldown has a link directly to the Knowledge Base, located on the **"Additional Resources"** cascading menu.

