

Navigation: Autodesk Fabrication Help > Object Annotation > Level & Size Blocks

TOOLBAR

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COMMAND LINE SHIFT/RIGHT CLICK ELEVS, ATTDEF, DDEDIT CADmep+ > Levels

Blocks with attribute definitions can be used to create custom Level \ Size Labels: -attributes for Levels for reference to the Top, Centre or Bottom of Objects -attributes for Size for Object Width, Depth & Diameter

#### Attribute definitions

Cad-Duct/CAD-Mech supports the following attribute definitions

### Level attributes

Atribute Definition:	Levels from:	Object Reference:
TOP	Absolute Zero	Тор
MID	Absolute Zero	Centre
BTM	Absolute Zero	Bottom
STOP	Soffit	Тор
SMID	Soffit	Centre
SBTM	Soffit	Bottom
	Elevation Datum (Finished Floor	
FTOP	Level	Тор
	Elevation Datum (Finished Floor	
FMID	Level	Centre
	Elevation Datum (Finished Floor	
FBTM	Level	Bottom

#### Size attributes

Atribute
Definition:
WIDTH
DEPTH
DIA

Example - Duct work - Reporting Levels from Soffit & Absolute to Bottom of Duct

## Creating Attribute Definitions

**1.** Type ATTDEF at the command line

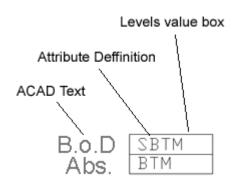
Mode	Attribute		
Invisible Constant Verify Recent	Tag: SBT Prompt:	M	
<u>P</u> reset     Loc <u>k</u> position     Multiple lines	Default: Text Settings	Left	
Insertion Point	Text <u>s</u> tyle:	Standard	•
<u>X</u> : 0	Text height:	1	s.
<u>Y</u> : 0	Rotation:	0	<b>B</b>
<u>Z</u> : 0	Boundary <u>w</u> idth:	0	
Align below previous	attribute definition	Cancel	Help

- **2.** Type **SBTM** as the first Attribute Tag
- 3. The recommendation is that the Text Style height is set to a value of 1 as this is eventually scaled by the Level Text Style height value

Note: If the Text Style Height field is greyed out, this indicates that the Text Style being used already has a height pre-assigned (Tools > Format > Text Style).

4. Click Ok to add the Attribute Definition to the drawing (unless specified will located @ 0,0,0)

5. Locate the Attribute Definition - Copy the **SBTM** definition to create the second Attribute Definition below the first, then use the DDEDIT command to rename the Attribute to BTM, as shown below:



6. Use the BLOCK command to create a Block Definition, select the ACAD Text, Attribute Definitions & Level value box.

Note: Level Blocks should be created on ACAD - Layer 0, by doing this they inherit the currently selected layer properties (this also allows the text layer to be frozen independently from the 3D duct layer - may require a REGEN)

- 7. Enter a Block Definition Name e.g. "Soffit\_Absolute"
- 8. Click Ok to the Block definition dialogue

Assigning the Block Definition to the Service - Service Type

- 1. Select the correct Service from drop-down menu e.g. HVAC General Supply
- 2. Select the correct Service Type and assign the Block Definition created earlier, as show below:

Setup Services	
Services Sections CAD Types Item Statuses Service Types Layering Fluid Properties Structure Types Support Specifications	Service       General Supply       Image: Service Specification       Not Set       Default Shape       Rectangular         Insulation Spec       Not Set       Flow Direction       Supply       Image: Supply       Image: Supply         Ignore Fitting Angle Tolerances       Fluid       Room Air 20C       Image: Service Types       Button Mappings       Terminals       Constraints       Design Entry       Offset Rules       DropInto Fall       Rise-Fall       Image: Service Types
Define Service Entry	Service Type Layer Tag 1 Layer Tag 2 Layer Col Level Block Insulation Size Block
Data     Value       Service Type     1: Rectangular Duct       Layer Tag 1     M570       Layer Tag 2     GEN_SUP       Layer Colour     70       Level Block     Soffit_Absolute       Size Block     Rectangular       Level Text Includes I	Equipment       M570       GEN_SUP       6 (Mage       No         Hanger       M570       GEN_SUP       40       No         Oval Duct       M570       GEN_SUP       70       No         Rectangular Duct       M570       GEN_SUP       70       Soffit_Absolute       No         Round Duct       M570       GEN_SUP       70       No       Rectangular          III       V       V       V       Ok       Cancel
Preview Close	

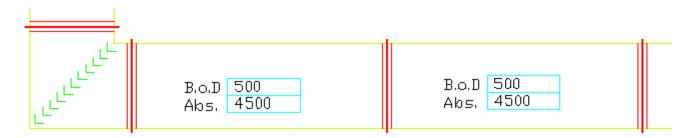
## 3. Click Close

**4.** Click Apply/Ok to the Setup Services dialogue

# Adding the Block Levels Label

1. Add a Rectangular Duct Item to the drawing

- Select the Levels button
   Select the Rectangular Duct Item.



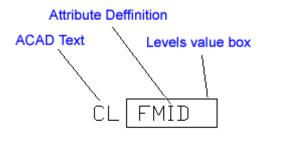
**Example - Pipe work -** Reporting Levels from Elevation Datum (Finished Floor Level) to Centre Line

# **Creating Attribute Definitions**

1. Type ATTDEF

Mode Invisible Constant Verify	Attribute Tag: FMIC Prompt:	)	
Preset  Lock position  Multiple lines  Insertion Point  Specify on-screen	Defau <u>i</u> t: Text Settings Justification: Text <u>s</u> tyle: Annotative (1)	Left Standard	
<u>X:</u> 0 <u>Y</u> : 0	Text h <u>e</u> ight: <u>R</u> otation:	1 0	<b>5</b>
Z: 0	Boundary <u>w</u> idth:	0	

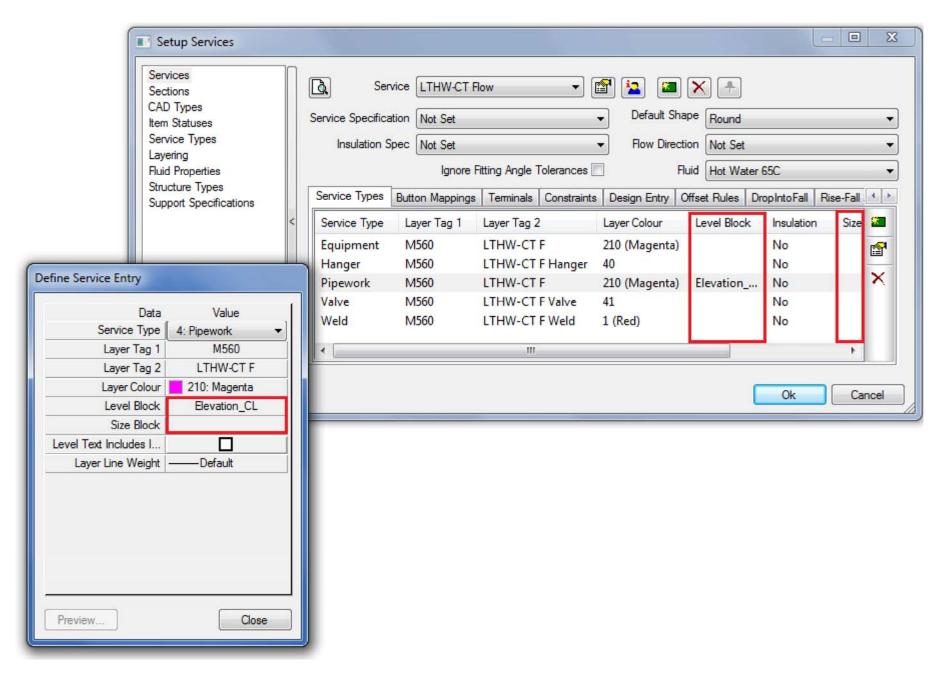
- Type FMID as the first Attribute Tag
   Check that the Text Style height is set to a value of 1
- 4. Click Ok to add the Attribute Definition to the drawing (unless specified located @ 0,0,0)
  5. Create ACAD Text for the Level description, as per Example below "CL" if desired create a Levels' value box.



- 6. Use the **BLOCK** command to create a **Block Definition**, select the **ACAD Text**, **Attribute Definition** & **Level value box**.
- 7. Enter a Block Definition Name e.g. "Elevation\_CL"
   8. Click Ok to the Block definition dialogue

#### Assigning the Block Definition to the Service - Service Type

- 1. Select the correct Service from drop-down menu e.g. Water & Liquid Supplies Mains Cold Water
- 2. Select the correct *Service Type* and assign the Block Definition created earlier, as show below:



3. Click Close

4. Click Apply/Ok to the Setup Services dialogue

# Adding the Block Level Label

- 1. Add a Pipe work Item to the drawing
- Select the Levels button
   Select the Pipe with the second sec
- 3. Select the Pipe work Item.

CL 2500	

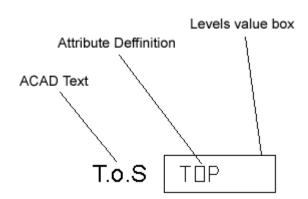
Example - Steel work - Levels from Absolute to Top of Steel work

# reating Attribute Definitions

1. Type ATTDEF

Mode	Attribute		
<ul> <li>Invisible</li> <li>Constant</li> <li>Verify</li> <li>Preset</li> </ul>	Tag: TOP Pro <u>m</u> pt: Defau <u>l</u> t:		2
Loc <u>k</u> position     Multiple lines     Insertion Point     Specify <u>o</u> n-screen	Text Settings Justification: Text style:	Left Standard	• •
<u>X:</u> 0 <u>Y:</u> 0	Text height:	1	R
<u>z</u> : 0	Boundary width:	0	<b>.</b>
Align below previous	s attribute definition	Cancel	Help

- Type TOP as the Attribute Tag
   Check that the Text Style height is set to a value of 1
   Click Ok to add the Attribute Definition to the drawing (unless specified located @ 0,0,0)
   Create ACAD Text for the Level description, as per Example below "T.o.S" if desired create a Levels' value box.



- 6. Use the **BLOCK** command to create a **Block Definition**, select the **ACAD Text**, **Attribute Definition** & **Level value box**.
- 7. Enter a Block Definition Name e.g. "Top of Steel"
- 8. Click Ok to the Block definition dialogue
- 9. Click Ok to the Edit Attributes dialogue

Note: When setting Soffit or Elevation datum's refer to the <u>Sections</u> topic.

#### Assigning the Block Definition to the Service - Service Type

- 1. Select the correct Service from drop-down menu e.g. Structural Steelwork Structural
- 2. Select the correct Service Type and assign the Block Definition created earlier, as show below:

Setup Services		
Services Sections CAD Types	Service Steelwork Structural 🔹 🕋 🔛 🐥	
Item Statuses	Service Specification Not Set	•
Service Types Layering	Insulation Spec Not Set	
Fluid Properties Structure Types	Ignore Fitting Angle Tolerances Fluid Not Set	•
Support Specifications		size Block Lay
	Equipment M200 STRUC_STEEL 43 No	
Define Service Entry	Steel M200 STRUC_STEEL 43 Top_of_St No	De X
Data     Value       Service Type     55: Steel       Layer Tag 1     M200       Layer Tag 2     STRUC_STEEL       Layer Colour     43       Level Block     Top_of_Steel       Size Block     Image: Size Block       Layer Line Weight     Default		Ok Cancel
Preview Close		

- Click Close
   Click Apply/Ok to the Setup Services dialogue

- 1. Add a Structural Steel Item to the drawing
- Select the Levels button
   Select the Structure
- 3. Select the Structural Steel Item.

