

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

TOOLBAR

135 100

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

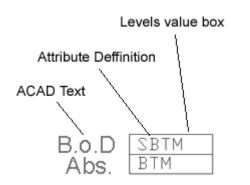
Mode	Attribute		
Invisible Constant Verify Recent	Tag: SBT Prompt:	M	
<u>P</u> reset Loc <u>k</u> position Multiple lines	Default: Text Settings	Left	
Insertion Point	Text <u>s</u> tyle:	Standard	•
<u>X</u> : 0	Text height:	1	s.
<u>Y</u> : 0	Rotation:	0	B
<u>Z</u> : 0	Boundary <u>w</u> idth:	0	
Align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

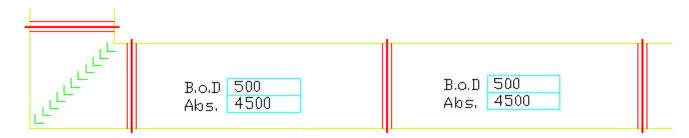
3. Click Close

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.



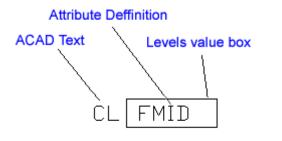
Example - Pipe work - Reporting Levels from Elevation Datum (Finished Floor Level) to Centre Line

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	5
Z: 0	Boundary <u>w</u> idth:	0	

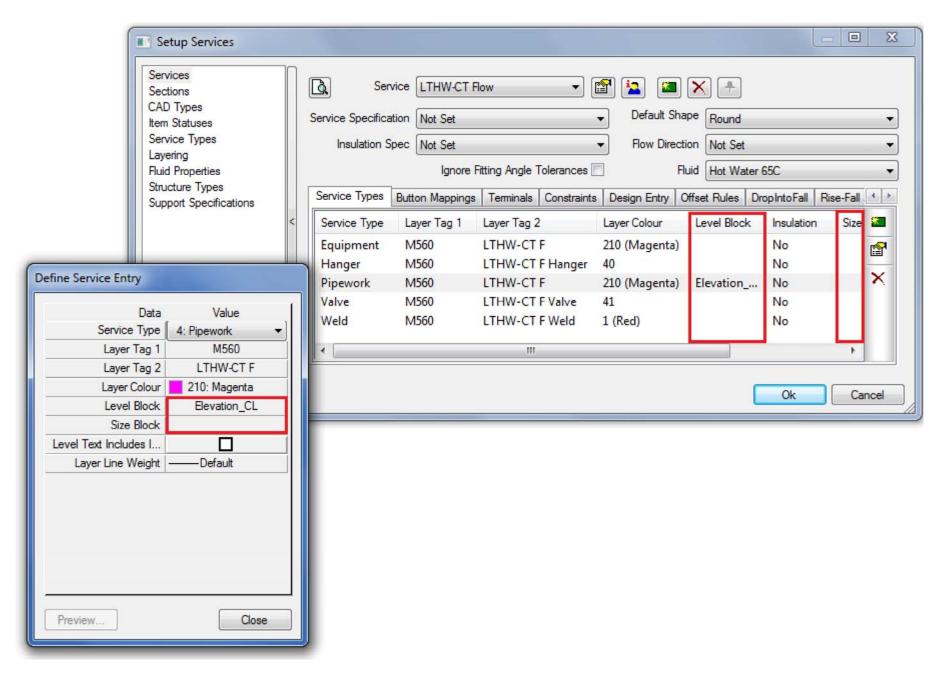
- Type FMID as the first Attribute Tag
 Check that the Text Style height is set to a value of 1
- 4. Click Ok to add the Attribute Definition to the drawing (unless specified located @ 0,0,0)
 5. Create ACAD Text for the Level description, as per Example below "CL" if desired create a Levels' value box.



- 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	

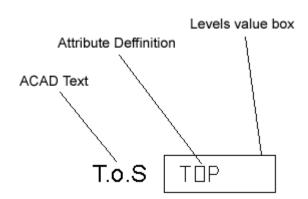
Example - Steel work - Levels from Absolute to Top of Steel work

reating Attribute Definitions

1. Type ATTDEF

Mode	Attribute		
 Invisible Constant Verify Preset 	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	.
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.

