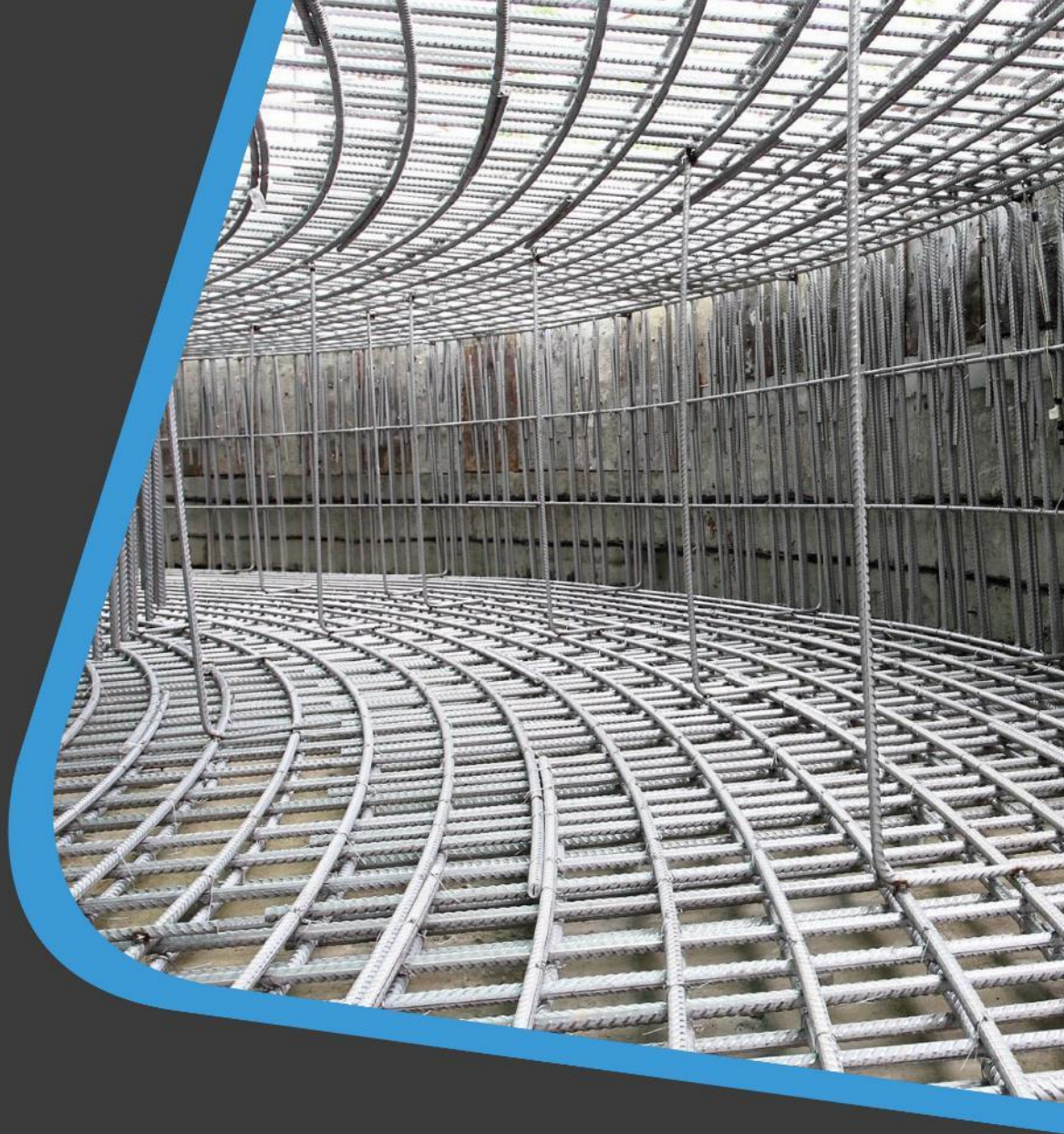




# CADS Viewport Manager

## User Guide



GLOBAL CONSTRUCTION  
SOFTWARE AND SERVICES



Microsoft  
Partner

## Contents

|       |                                                            |    |
|-------|------------------------------------------------------------|----|
| 1     | Introduction .....                                         | 4  |
| 2     | Program Features & Installation Requirements .....         | 5  |
| 2.1   | Hardware and Software Requirements .....                   | 5  |
| 2.1.1 | Hardware .....                                             | 5  |
| 2.1.2 | Software .....                                             | 5  |
| 2.2   | Program Features .....                                     | 5  |
| 2.3   | Installation .....                                         | 5  |
| 2.3.1 | Loading and Authorising CADS VPM inside AutoCAD .....      | 6  |
| 2.3.2 | Loading Other CADS Applications with CADS VPM .....        | 6  |
| 2.3.3 | CADS VPM Ribbon Panel .....                                | 6  |
| 2.3.4 | Loading the CADS VPM Toolbar .....                         | 7  |
| 3     | Command Guide .....                                        | 8  |
| 3.1   | CADS VPM Commands .....                                    | 8  |
| 3.2   | Set Working Scale .....                                    | 8  |
| 3.3   | Create Layout .....                                        | 8  |
| 3.3.1 | Sheet Configuration .....                                  | 9  |
| 3.4   | Create Viewport .....                                      | 9  |
| 3.4.1 | Layout Space .....                                         | 9  |
| 3.4.2 | Model Space .....                                          | 10 |
| 3.4.3 | Create Viewport dialog – Non-rectangular option .....      | 10 |
| 3.5   | Toggle Options for Viewport Title, Borders and Scale ..... | 11 |
| 3.5.1 | Toggle Viewport Borders On/Off .....                       | 12 |
| 3.5.2 | Toggle Viewport Titles On/Off .....                        | 12 |
| 3.5.3 | Toggle Viewport Scale Text On/Off .....                    | 12 |
| 3.5.4 | Toggle All On/Off .....                                    | 12 |
| 3.6   | Zoom Screen to Viewport .....                              | 12 |
| 3.7   | Sheet Configuration .....                                  | 12 |
| 3.7.1 | Create .....                                               | 13 |
| 3.7.2 | Edit .....                                                 | 14 |
| 3.7.3 | Write Prototype Settings .....                             | 14 |
| 3.8   | General Configuration .....                                | 15 |
| 3.9   | Configuration Options .....                                | 15 |
| 3.9.1 | Text / Dtext / Mtext Scaling Options: .....                | 16 |
| 3.9.2 | Ask this question every time: .....                        | 16 |
| 3.9.3 | Never rescale and never ask again: .....                   | 17 |

|       |                                                    |    |
|-------|----------------------------------------------------|----|
| 3.9.4 | Always rescale and never ask again: .....          | 17 |
| 3.9.5 | Viewport Title Text Height .....                   | 17 |
| 3.10  | Refresh Detail .....                               | 17 |
| 3.11  | Editing Options for Scale Region and Viewport..... | 17 |
| 3.12  | About CADS VPM .....                               | 18 |
| 4     | Worked Examples .....                              | 19 |
| 4.1   | Creating a Layout and Adding Viewports .....       | 19 |
| 4.1.1 | Creating a Layout .....                            | 19 |
| 4.1.2 | Creating a Viewport .....                          | 21 |
| 4.2   | Creating a detail and rescaling the detail.....    | 24 |
| 4.3   | Creating a Viewport from Model Space .....         | 26 |
| 5     | General Configuration Settings .....               | 29 |

# 1 Introduction

CADS VPM has been designed to work with AutoCAD and AutoCAD Architectural version 2027.

CADS VPM is an intelligent program that gives the user a great deal of flexibility in setting up and managing model/paper space viewports in AutoCAD. CADS VPM works with any AutoCAD drawing.

CADS VPM features several improvements when compared to CADS Scale;

- The working scale of the drawing changes automatically as the mouse moves from one viewport to another in layout space. If working in model space the working scale of the drawing changes as the mouse passes across each red viewport region.
- There are viewport regions in the Model space that are associated with the viewport in the layout space. If the viewport or viewport region is resized the associated viewport or viewport region resizes as well.
- AutoCAD annotations such as dimensions and text are automatically rescaled to the scale of the viewport.
- The drawing sheet set-up command, Create Layout will support the use of user defined title blocks, and allows the definition of a plot device, plot style and paper size.
- Dimensioning and text notes within the viewports remain scale-independent; (i.e. the plotted height of these entities remains constant across the entire drawing.)
- CADS Viewport Manager also supports non rectangular viewports.
- Also CADS Viewport Manager relies on the system variable DIMSCALE to be set relative to the current working scale, the program does this automatically.
- Please note that CADS Viewport Manager does not support Annotative Dimensions or Annotative Text.

## 2 Program Features & Installation Requirements

### 2.1 Hardware and Software Requirements

#### 2.1.1 Hardware

A computer capable of running AutoCAD 2027 or higher; or AutoCAD Architecture 2027 or higher is a requirement. Please refer to the Autodesk website for detailed specifications of hardware for AutoCAD.

#### 2.1.2 Software

CADS Viewport Manager supports Windows 11 installed with AutoCAD and AutoCAD Architecture version 2027.

### 2.2 Program Features

CADS Viewport Manager has been primarily designed to manage the scaling in your paper space viewports.

The program offers the following features:

- Viewports can be allocated names, displayed and plotted.
- The scale of the viewport can be displayed and plotted.
- The working scale changes automatically while drawing within the viewport region.
- Text for the dimensions and the viewports remain constant throughout the drawing.
- AutoCAD Text and Mtext will remain constant in operations such as copying and moving across viewport regions.
- Most options are user configurable in order to set the program defaults.
- The Viewport Region can be constructed through a viewport or directly from the model space by selecting the area of the drawing and specifying the scale. The user is then prompted to place the viewport in the Paper Space.
- Viewports can be easily resized or moved using standard AutoCAD editing commands to suit any layout.
- Non rectangular viewports can be created.

### 2.3 Installation

Full detailed instructions for installing all CADS Detailing Applications which include CADS VPM can be found in the accompanying CADS AutoCAD Detailing Applications Installation Guide.

## 2.3.1 Loading and Authorising CADS VPM inside AutoCAD

CADS VPM once authorised in the CADS Software Licence Manager will automatically load when either CADS RC or CADS SW is started up.

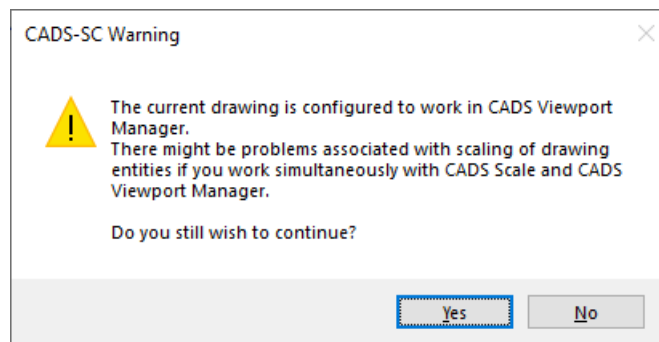
There is an exception to this if the Automatic Loading Toggle  has been disabled then none of the detailing applications will load on start-up and they will have to be loaded individually from the Quick Access Toolbar or the CADS Toolbar.



Quick Access Toolbar & CADS Toolbar

## 2.3.2 Loading Other CADS Applications with CADS VPM

This version of CADS VPM has been designed to work with CADS SW, CADS RC. This version of CADS VPM has NOT been designed to work with CADS Scale software. If you try to run both applications in the same drawing the following warning will be displayed. You are advised not to continue.



CADS Scale Warning Message

## 2.3.3 CADS VPM Ribbon Panel

The CADS VPM Panel is automatically added to the CADS RC / CADS SW Ribbon.



CADS VPM Panel and Drop Down Menu

## 2.3.4 Loading the CADS VPM Toolbar



CADS VPM Toolbar

The CADS VPM toolbar is not loaded automatically as the commands now appear on the Ribbon menu. However, if the toolbar is required, load the pull down menus by typing “Menubar” at the AutoCAD command line and set it to 1. Then go to the Tools menu, select Toolbars then CADS VPM and then CADS VPM.

## 3 Command Guide

### 3.1 CADS VPM Commands

Any function that requires the user to select a viewport will automatically check if you are already 'inside' a viewport. If a viewport is active, then the command will automatically select that one; otherwise you will be requested to pick one.

### 3.2 Set Working Scale

CADS VPM Panel – Set Working Scale 

#### Explanation

Defines the default working scale for the drawing.

Whenever a new drawing is created this command gets invoked automatically to define the working scale of the drawing for the first time. This scale value is used for entities which are not part of any viewport.

Note: If working with several different viewports on a drawing keep the background working scale of the drawing at 1:1.

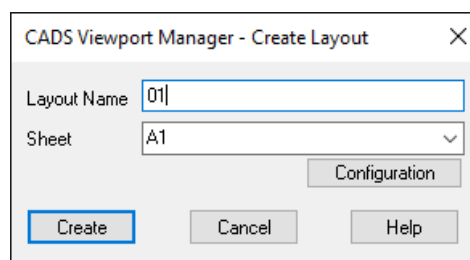
### 3.3 Create Layout

CADS VPM Panel – Create Layout 

#### Explanation

This command allows you to create a new AutoCAD Layout quickly with a predefined paper size, plot style and title block.

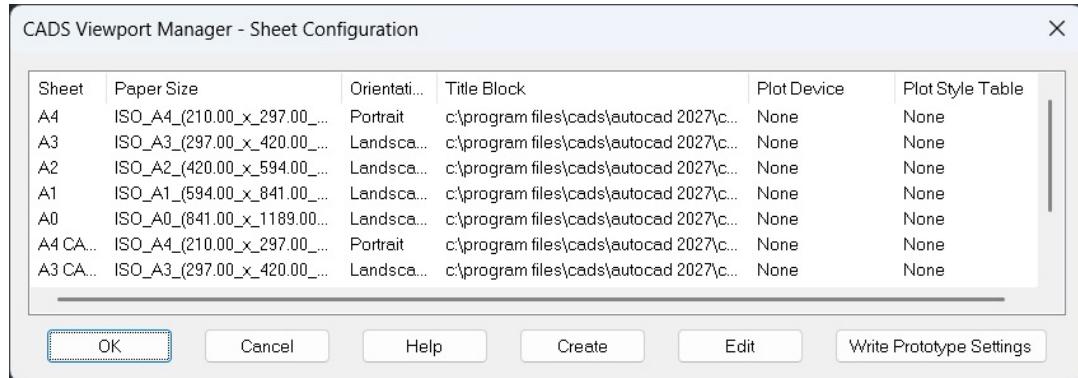
Enter the Layout name and select a sheet from the list. Selecting "Create" adds a new layout to the drawing file with the options selected and makes it active.



Create Layout dialog

## 3.3.1 Sheet Configuration

Selecting the option “Configuration” displays the “Sheet configuration” dialog box where predefined sheets can be Created / Modified. Please refer to the chapter “on “Sheet Configuration” for further details.



Sheet Configuration dialog

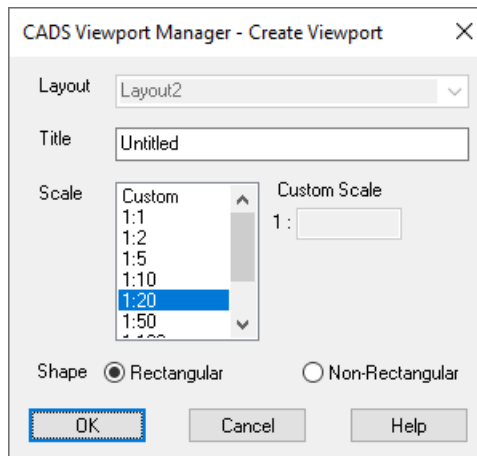
## 3.4 Create Viewport

CADS VPM Panel – Create Viewport



### Explanation

This command allows the user to create a new viewport either through Model space or from a Layout.



Create Viewport dialog

### 3.4.1 Layout Space

If the command is invoked from Layout Space, the dialog box above is displayed. Enter a title if required and select the scale for the viewport and click OK.

The command then prompts for the two corner points for the viewport. On selecting the corner points, the viewport is created in the active Layout and then it asks for the positioning of the viewport region in the Model space.

## 3.4.2 Model Space

If the command is invoked from model space, the Create View Dialog shown above will be displayed. The Layout option will be active, select which layout to add the viewport, enter a title if required and select the scale. Pick the corner points to form the viewport region in model space, this could be around an existing detail. The command will then switch to layout space and prompt for the positioning of the viewport. If the detail was drawn at a different scale its entities will be automatically rescaled to suit the viewport scale.

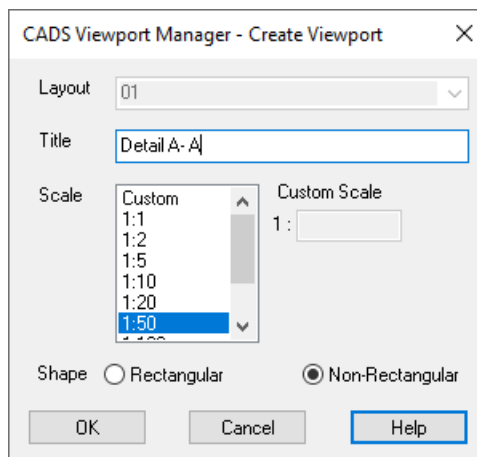
The Inserted viewport carries the title and the scale as shown below.



Rectangular Viewport

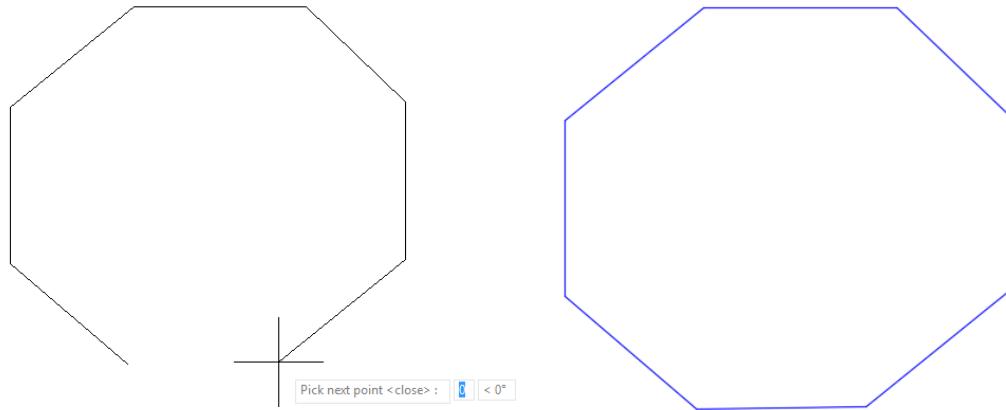
## 3.4.3 Create Viewport dialog – Non-rectangular option

In the Create Viewport dialog select Layout, type in the title and select the scale as before and then click on the Non-Rectangular option. Click ok to continue.



Create Viewport dialog

Pick the outline of the viewport, use the close option to finish the viewport.

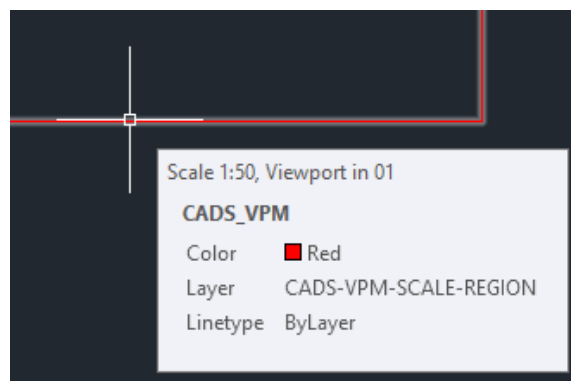


Non-Rectangular Viewport

Please note that the finished viewport does not have a title or the scale shown.

## Hints & Tips

If you hover over the boundary for the viewport region in model space, the Scale and Layout association are displayed in the Tooltips.

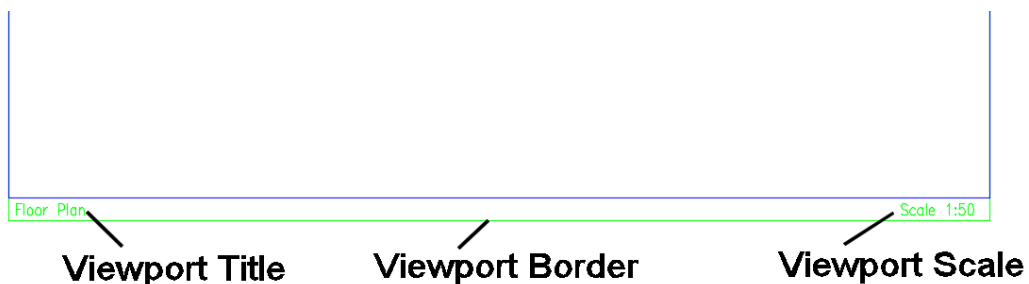


CADS VPM Tooltip

## 3.5 Toggle Options for Viewport Title, Borders and Scale

### Explanation

These commands toggle the borders, the viewport title and the scale text on or off, that appear in the layout/s.



Layout Space Viewport elements

### 3.5.1 Toggle Viewport Borders On/Off

CADS VPM Panel – Drop Down Menu – Toggle Viewport Borders On/Off



This command toggles the border of the selected viewports on or off.

### 3.5.2 Toggle Viewport Titles On/Off

CADS VPM Panel – Drop Down Menu – Toggle Viewport Titles On/Off



This command toggles the title of the selected viewports on or off.

### 3.5.3 Toggle Viewport Scale Text On/Off

CADS VPM Panel – Drop Down Menu – Toggle Viewport Scale Text On/Off



This command toggles the scale text of the selected viewports on or off.

### 3.5.4 Toggle All On/Off

CADS VPM Panel – Drop Down Menu – Toggle All On/Off



This command toggles the scale text, the borders, and the viewport title of the selected viewports on or off.

## 3.6 Zoom Screen to Viewport

CADS VPM Panel – Drop Down Menu – Zoom Screen to Viewport



#### Explanation

This command will zoom to the extent of a selected Viewport in the layout and display it at the maximum possible size on the screen. To return to the full layout view of the whole drawing, switch to paper space and then use Zoom Extents.

The display will zoom into the selected viewport.

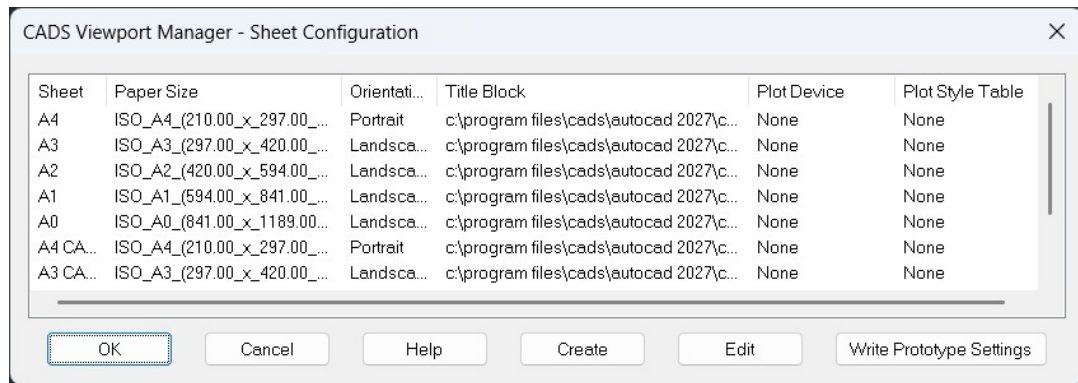
## 3.7 Sheet Configuration

CADS VPM Panel – Drop Down Menu – Sheet Configuration



#### Explanation

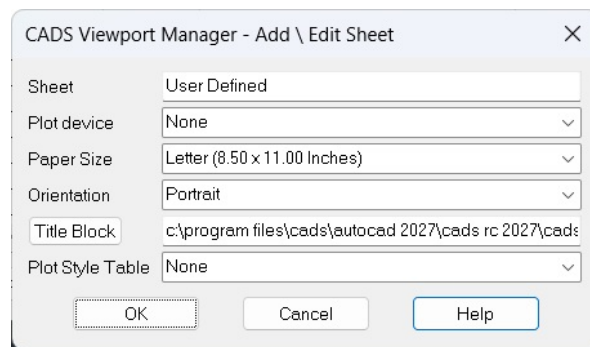
This option allows the user to define their own sheet configuration and modify the existing sheet configurations.



CADS VPM Sheet Configuration Dialog

## 3.7.1 Create

Selecting the Create option displays the following dialog.



CADS VPM Create Sheet Dialog

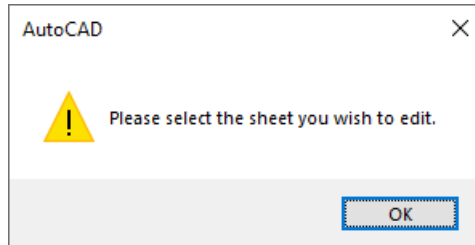
Enter the following details;

- Sheet:** Enter the sheet name to appear in the Create Layout dialog, this could be the sheet size and company name.
- Plot Device:** Select a Plot device from the drop down list to be used when plotting this sheet, this option can be left set to None so the plotter can be selected later.
- Paper Size:** Select the paper size from the list of sizes available for the configured plotter.
- Orientation:** Choose whether the sheet should be created with a Portrait or Landscape orientation.
- Title Block:** Browse to select the Title block that will be inserted in the layout. Please note that the title block should be drawn in model space at a scale of 1:1.
- Plot Style table:** Select the Plot style tables available from the drop down list.

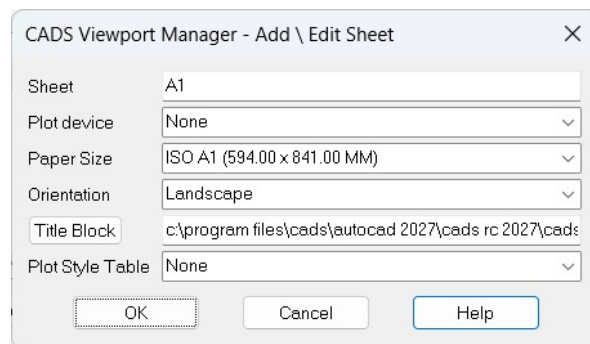
Selecting OK creates a new Sheet configuration which is stored for the drawing and can be used at any time for that drawing. If the new sheet configuration needs to be available for all new drawings, select the Write Prototype Settings on the Sheet Configuration dialog.

## 3.7.2 Edit

Selecting the “Edit” option allows the user to modify the existing sheet configuration. If you do not select one of the sheet definitions in the dialog the following dialog is displayed. The options in the dialog are described above in the Create chapter.



CADS VPM Advisory Message

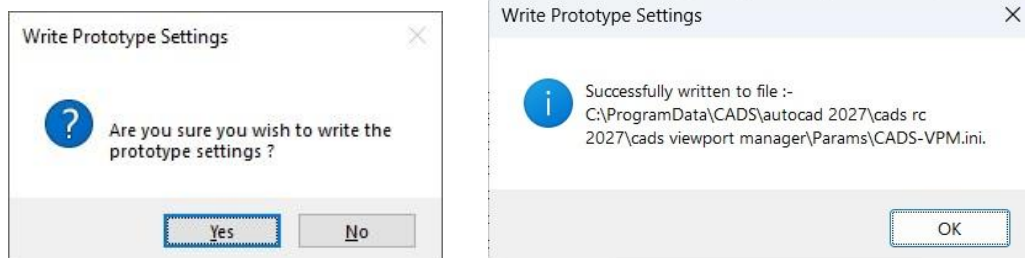


CADS VPM Edit Sheet Dialog

## 3.7.3 Write Prototype Settings

Write Prototype Settings

The Write Prototype Settings option will save any changes made to the CADS VPM Configuration to a CADS-VPM.INI file in the “C:\ProgramData\CADS\AutoCAD 20xx\cads viewport manager 20xx\Params” folder. The AutoCAD and CADS RC version may vary on your PC. This means that all new drawings that use CADS VPM will read this INI file and load up the configuration for the program from this file. The CADS-VPM.INI file can be copied from one PC to another provided that the configured title blocks are transferred as well. When the option is selected the Confirmation and location dialog boxes appear.



Write Prototype Settings Confirmation dialog & File Location and Name dialog

## 3.8 General Configuration

CADS VPM Panel – Drop Down Menu – General Configuration 

### Explanation

This option allows the user to modify the global configuration settings of CADS VPM.



Global Configuration dialog

Select the group item for which the configuration needs to be changed in the combo box. This displays the list of available configuration items as shown in the dialog. Select the configuration item and change the value and then click the “Assign to CFG.” option. This will update the current configuration and make it available for the current drawing only.

See Chapter 4 for an explanation of each of the General Configuration Settings.

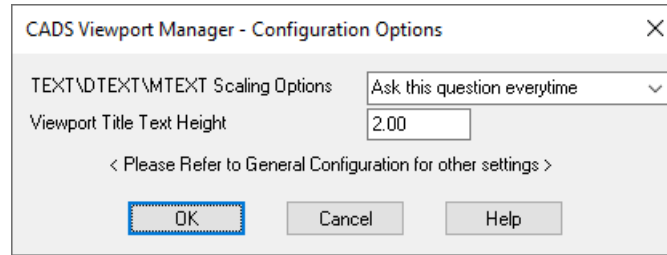
## 3.9 Configuration Options

CADS VPM Panel – Drop Down Menu –Configuration Options 

### Explanation

This option allows the text scaling configuration options to be set.

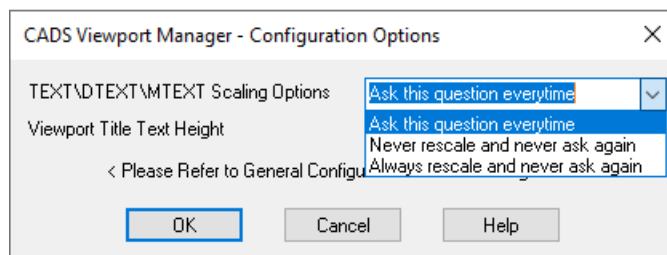
Selecting this option displays the following dialog.



Configuration Options dialog

## 3.9.1 Text / Dtext / Mtext Scaling Options:

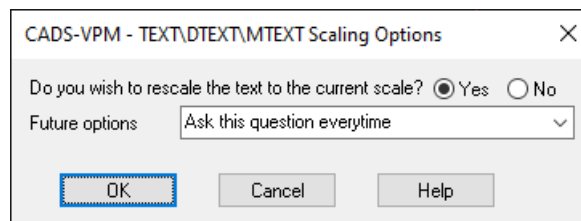
The following options allow the user to configure the scaling requirement for the Text/Dtext/Mtext while copying operations are in progress.



Configuration Options dialog

## 3.9.2 Ask this question every time:

The Scaling Options dialog, shown below, is displayed whenever the Copy / Move operations are made across the viewports.

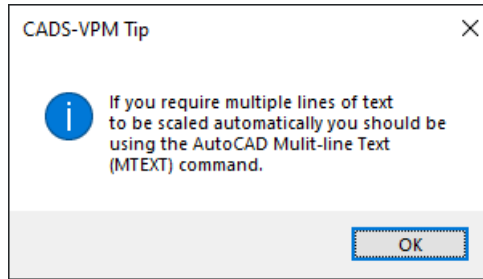


CADS VPM Text Scaling options dialog

Selecting “Yes” scales the text and selecting “No” will not rescale.

Therefore, when placing text in model space, if the text height is specified when as the plotted height i.e. 4mm and you select Yes to the scaling it will increase the height of the text by the scale of the viewport. So for a 1:20 viewport 4mm text will be rescaled to 80mm in model space.

If you have chosen the “Ask this question everytime” option, the first time it is invoked the following tip will be displayed.



CADS VPM Text Tip

### 3.9.3 Never rescale and never ask again:

Scaling will not be carried out and the scaling option dialog will not be displayed every time.

### 3.9.4 Always rescale and never ask again:

Scaling will be done always and the scale option dialog will not be displayed every time.

### 3.9.5 Viewport Title Text Height

This option allows the user to set the text height of the viewport title in the viewport.

## 3.10 Refresh Detail

CADS VPM Panel – Refresh Detail 

#### Explanation

This refreshes the contents of all the viewports and the Viewport Region. This command is especially useful if some of the entities fail to rescale correctly when being copied or moved between viewports.

## 3.11 Editing Options for Scale Region and Viewport

#### Explanation

Some of the basic AutoCAD commands viz. Move, Grip Stretch etc. are supported for the Viewports Regions and Viewport.

The following operations are not supported for the Viewports or the Viewport Regions.

1. Copying the Viewports or the Viewport Regions
2. Scaling
3. Mirroring, Arraying or Rotating

## 3.12 About CADS VPM

### Explanation

Lists information about the version and build number of CADS VPM, as well as contact telephone and e-mail numbers for the support and sales departments.

## 4 Worked Examples

### 4.1 Creating a Layout and Adding Viewports

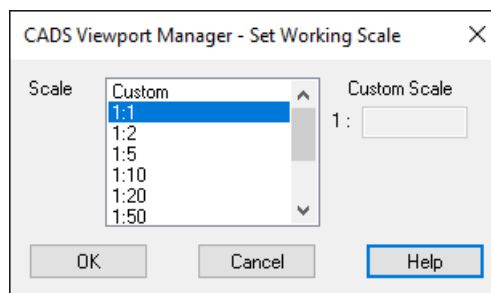
This example explains how to create a layout using CADS VPM and add viewports of differing scales

#### 4.1.1 Creating a Layout

1. Viewport Manager Panel – Create Layout 

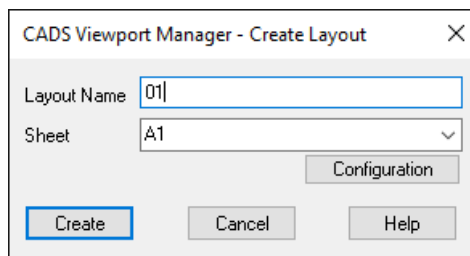
If this is the first time CADS VPM has been used on a drawing the Set Working Scale dialog is displayed.

2. Choose 1:1 and click Ok



Set Working Scale dialog

3. Change the Layout name to 01 and accept the A1 sheet size, then click Create



Create Layout dialog

4. Type in 01 for the Drawing Number to match the Layout Name and click Ok

**Edit Attributes** [X]

Block name: A1cads

DRAWING No.

Client

Architect

Job Title

.....

.....

Drawing Title

Site Reference 1

Site Reference 2

Drawn By

Date

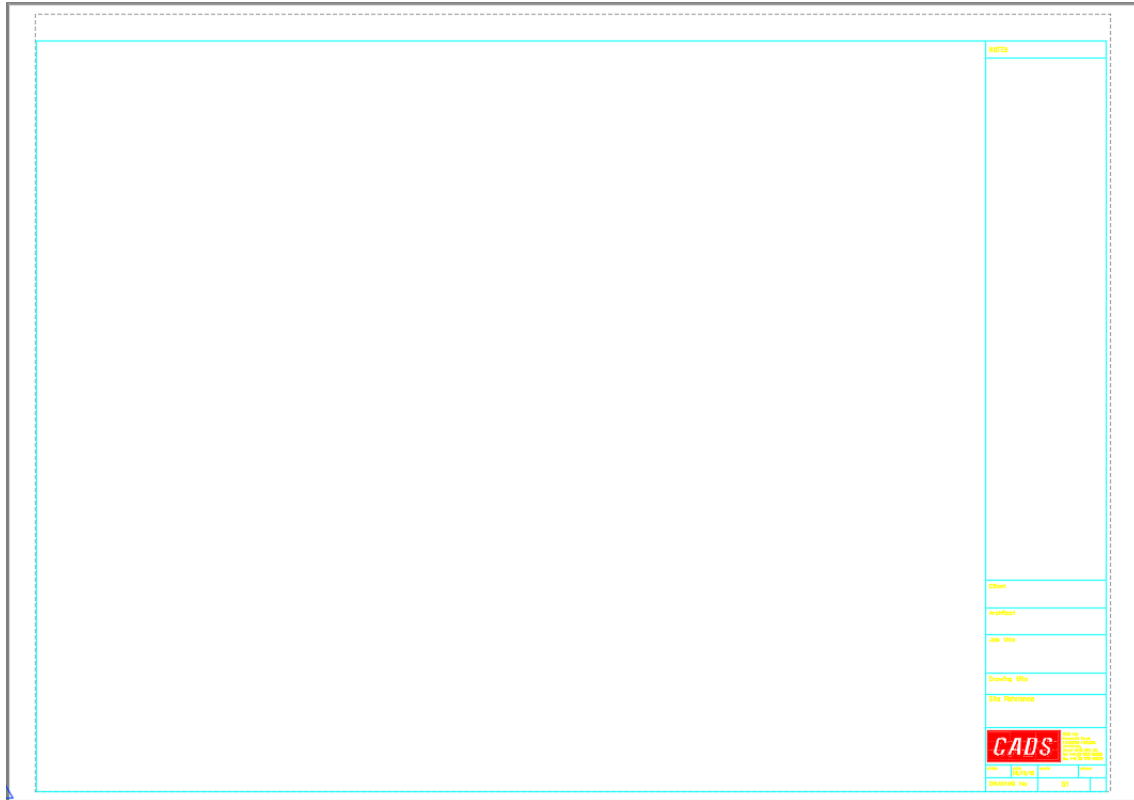
Checked by

Scale

Drawing Sheet Revision Mark

REVISIONTABLE

AutoCAD Edit Attribute dialog



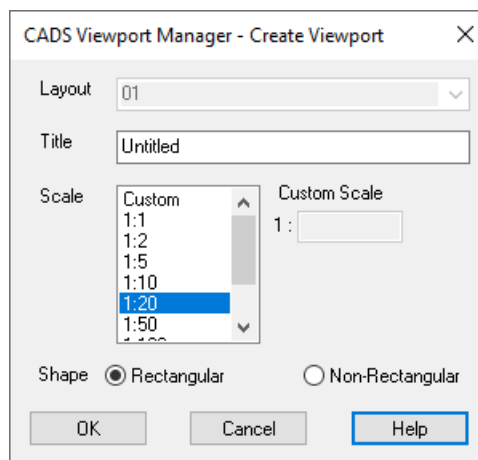
Drawing Sheet 01 in Paper Space

This completes this exercise.

## 4.1.2 Creating a Viewport

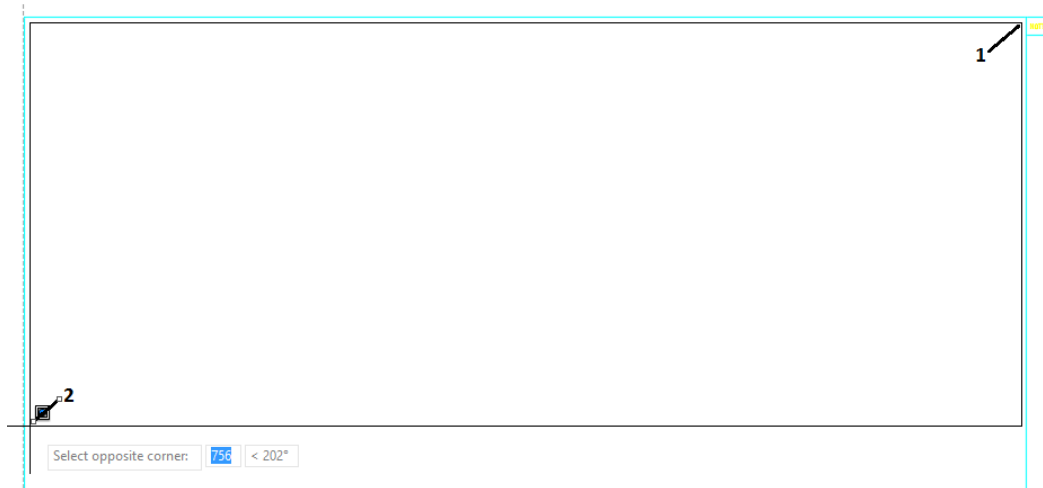
1. If not already in Paper Space, swap to Paper Space
2. Select Viewport Manager Panel – Create Viewport 

You can add a title to the viewport if required, select 1:20 Scale, make sure the Shape is set to Rectangle and click Ok



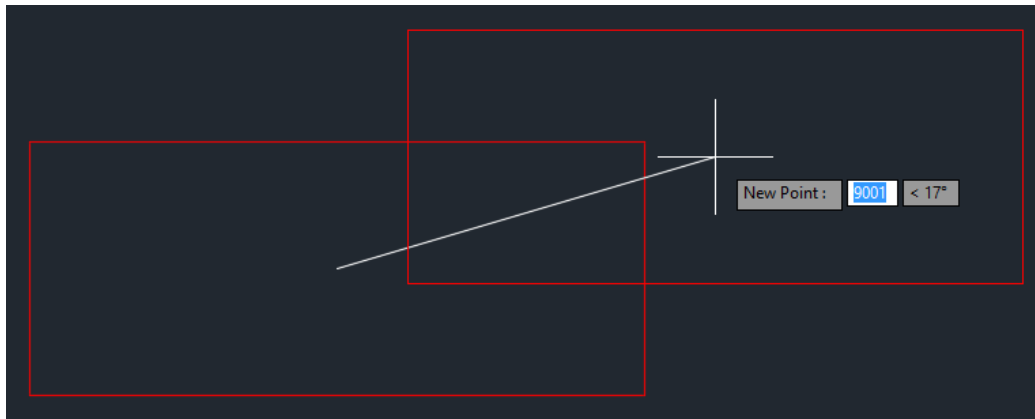
Create Viewport dialog

3. Select two diagonal points on the screen to specify the extents of the viewport as shown below;



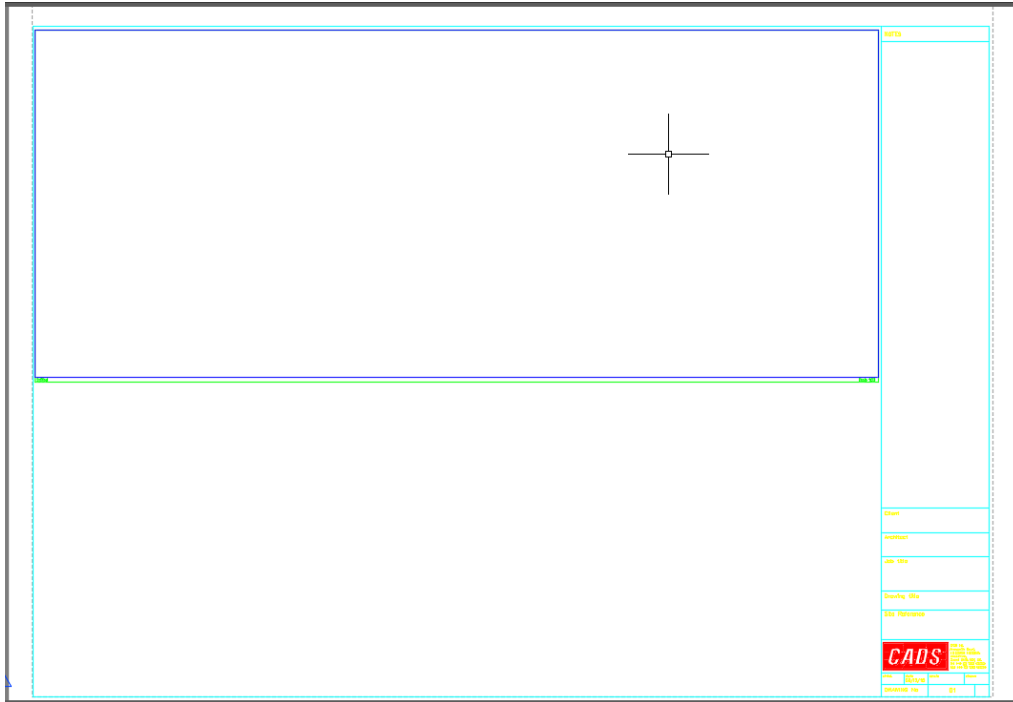
## Specifying extents of Viewport in Model Space

The command will switch to model space, place the viewport region in the positive co-ordinates in model space. (Positive co-ordinates are where both the X and the Y values are positive.)



## Specifying Location of Viewport Region in Model Space

The command will switch back to paper space

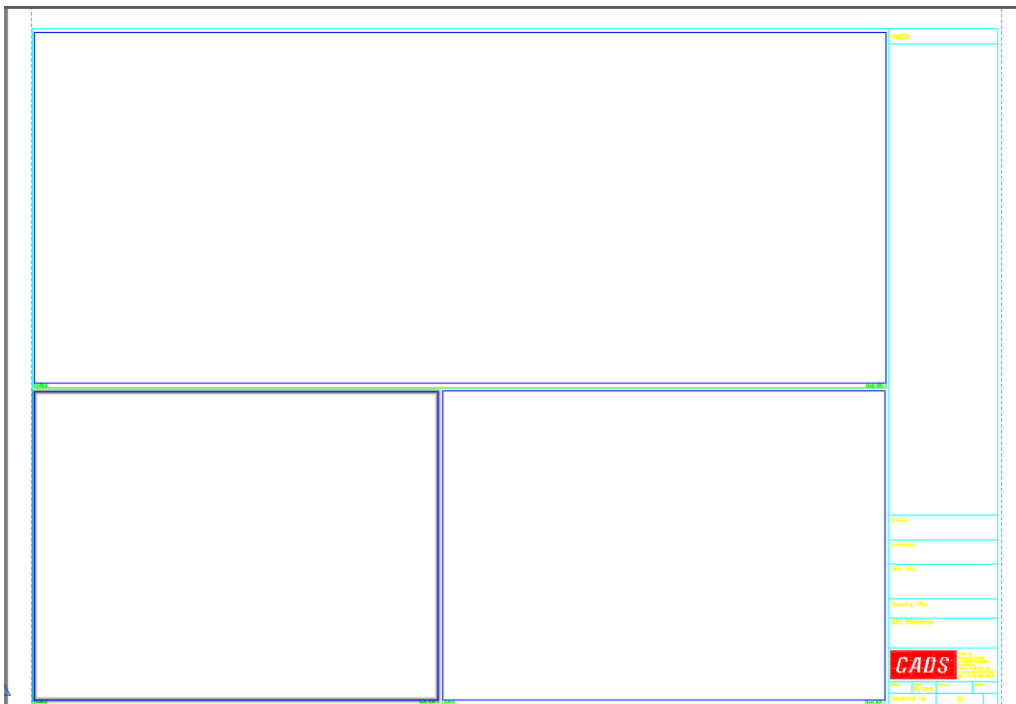


1:20 Viewport shown in Paper Space on Sheet 01

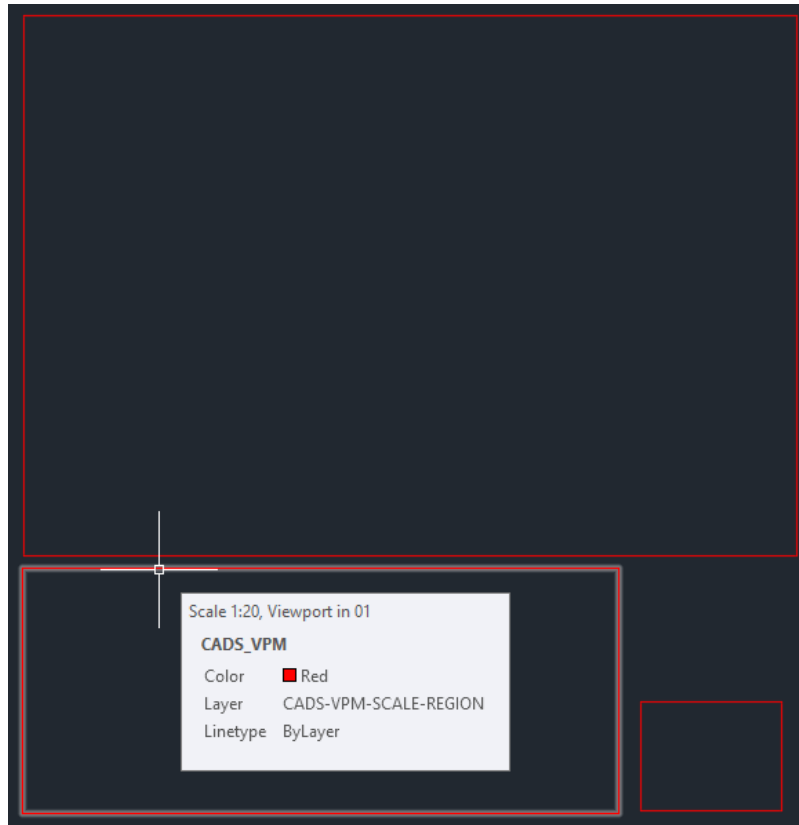
4. Continue using the Create Viewport command and add two further viewports at 1:10 and 1:50 scales.

Make sure that you do not overlap viewport regions in model space of different scales as this will cause problems with the entity scaling.

Always try to draw as near to 0,0 in the positive quadrant in model space, this will increase AutoCAD's and CADS RC's efficiency.



Drawing Sheet 01 with three viewports, 1:10, 1:20 & 1:50



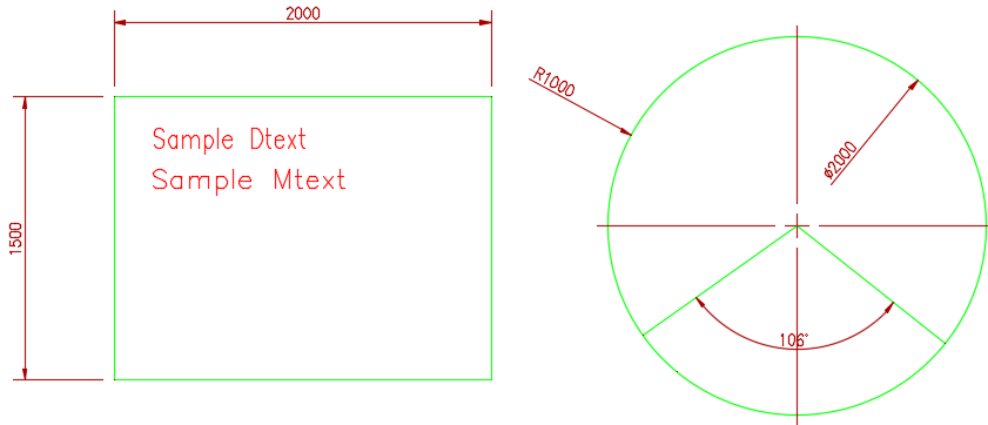
Viewport Regions in Model Space

If the mouse pointer is held over the viewport boundary the tooltip display shows the scale and layout the region is linked to.

This completes this exercise.

## 4.2 Creating a detail and rescaling the detail

1. Using the drawing created in the previous example, this example shows how to rescale details so that the text and dimensions are correctly rescaled when copied or moved between viewports.
2. With the drawing from the previous example open switch to model space
3. In the 1:20 Viewport Region draw the detail below using lines, polylines, circle and dimensions

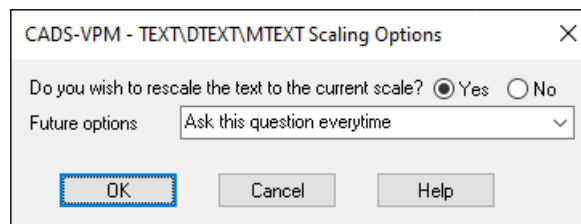


## Simple Detail for Rescaling with CADS VPM

4. Add two types of text Dtext and Mtext

When placing the text specify the height as the plotted height say 5mm

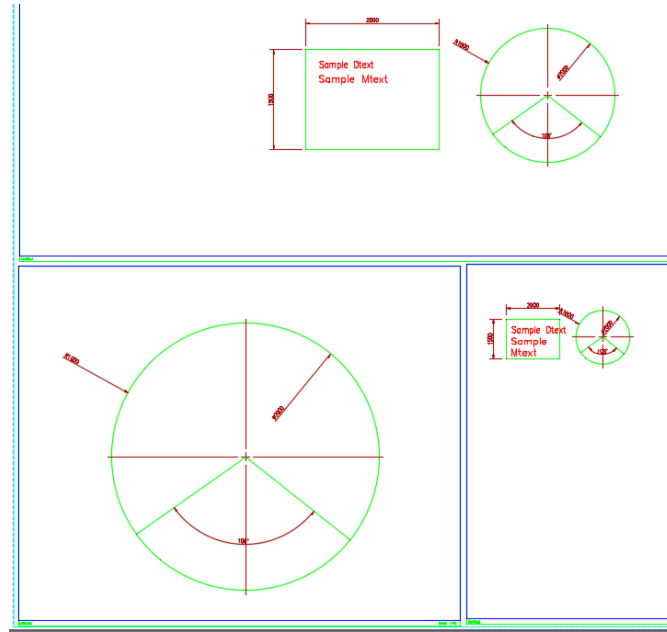
5. When the command is finished CADS VPM will interrupt and prompt



## CADS VPM Text Scaling Options

Answer Yes to this prompt, CADS VPM will automatically rescale the text by the scale of the viewport, for example 5 (text height specified) x 20 (scale) = 100mm.

6. Next copy the two details to the 1:10 viewport region.
7. Copy the circle detail to the 1:50 viewport region.
8. Switch to Paper Space Layout 01, the detail should look like the one below.



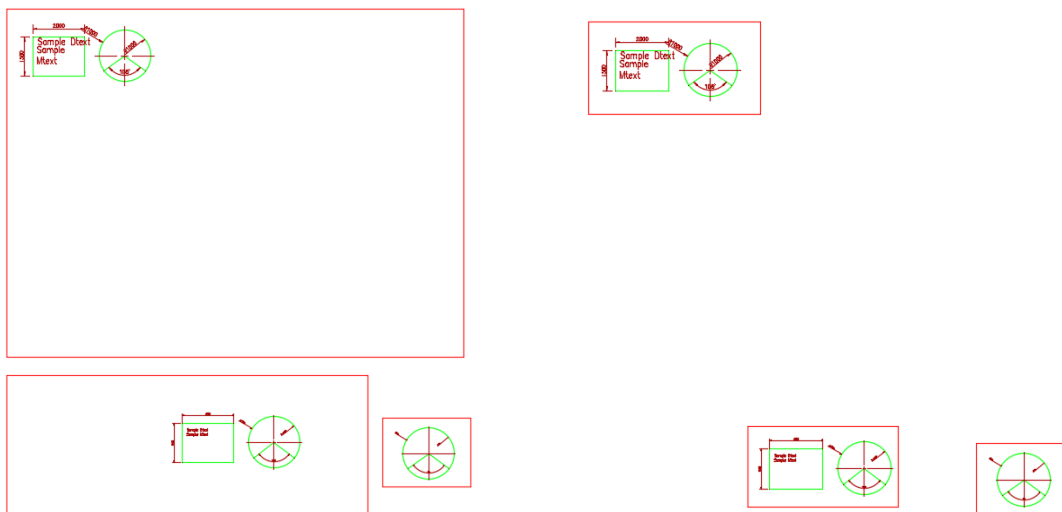
Finished Rescaled Details

9. If the details have not successfully rescaled select the Refresh Viewport command . Allow the command to refresh all the viewports.

This completes this exercise

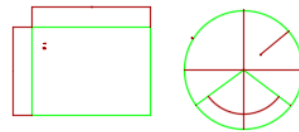
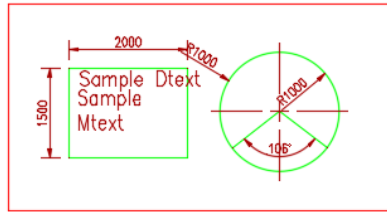
## 4.3 Creating a Viewport from Model Space

1. Using the drawing from the previous example, this exercise shows how to create a viewport region in model space and assign it to a drawing sheet.
2. With the drawing from the previous example open switch to model space
3. Resize the existing viewport regions so that they just enclose the details that are drawn inside them.



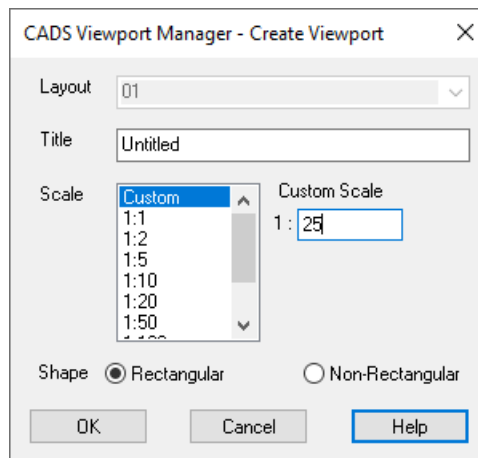
Viewport Regions full size and resized

- Copy the detail from the 1:50 viewport region into a clear area on the drawing.

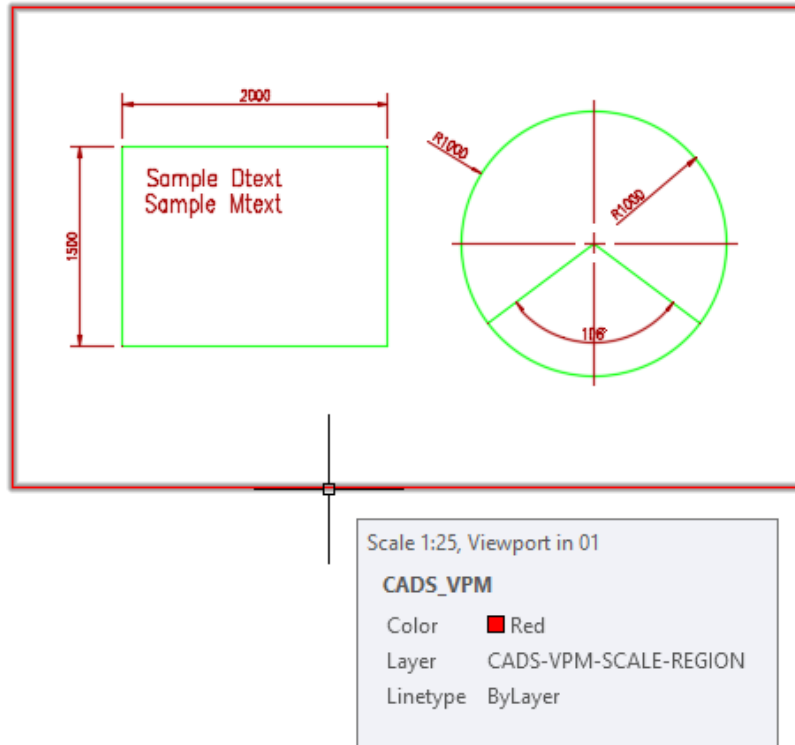


Copied Detail

- Notice how the dimensions and the text have rescaled to 1:1.
- Stay in Model Space and select the Create Viewport command.
- Create a viewport region around the detail that has just been copied at a Custom scale of 1:25 on Layout 01

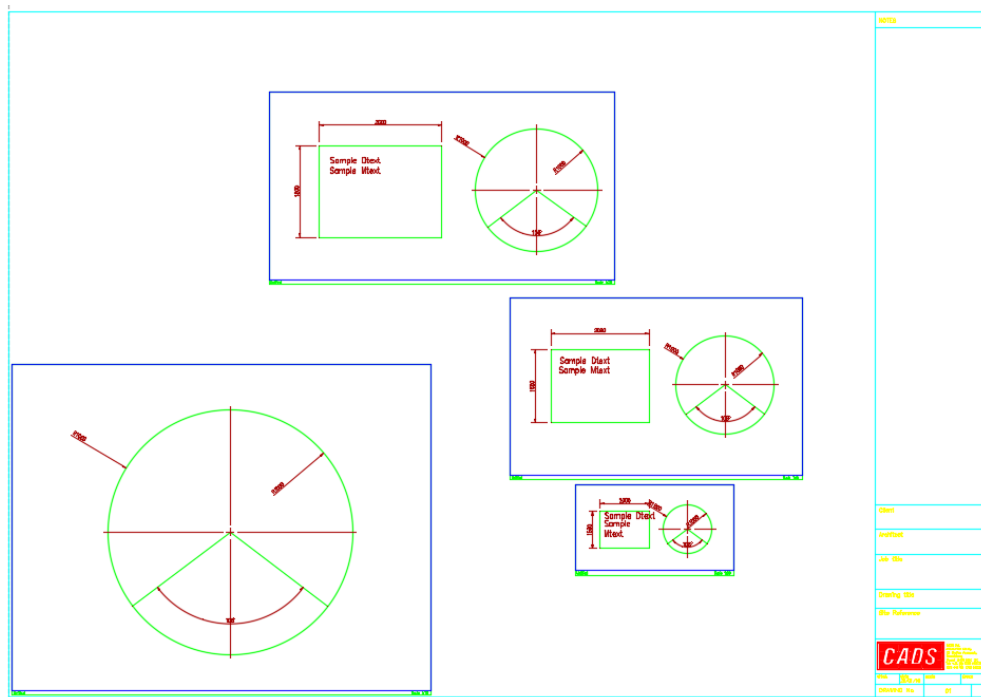


Create Viewport dialog



Detail enclosed in 1:25 viewport region

8. Once the points for the viewport region have been selected, the command will switch to paper space.
9. Select a location for the viewport.



1:25 Viewport Added to the Drawing Sheet

This completes this exercise.

## 5 General Configuration Settings

Listed below are then configuration variables for CADS VPM. The list is broken down into its headings and individual settings, default values and an explanation where applicable. There are some obvious repeats of some of the configuration items for different paper sizes, these have been omitted from the list below.

| Heading/Variable<br>Config   | Value         | Explanation                                                                            |
|------------------------------|---------------|----------------------------------------------------------------------------------------|
| CurrentCFG                   | Standard      | Current Configuration                                                                  |
| <b>ConversionPreferences</b> |               |                                                                                        |
| RequestConversionofViewports | YES           |                                                                                        |
| AlwaysConvertViewport        | YES           |                                                                                        |
| <b>ViewportConfig</b>        |               |                                                                                        |
| ViewportScalePrefix          | Scale         | Prefix text for the scale for viewport in Layout Space                                 |
| ViewportTextHeight           | ~mm~2.0       | Plotted text height                                                                    |
| ViewportUnitText             | mm            | Text units                                                                             |
| ViewPortUnitTextM            | M             | Viewport Text units Meters                                                             |
| ViewPortUnitTextFT           | Ft            | Viewport Text units Feet                                                               |
| ViewPortUnitTextIN           | in            | Viewport Text units Inches                                                             |
| DefaultIntoNewViewport       | YES           |                                                                                        |
| DimsLayerPrefix              | VP_           | Prefix for Viewport Dimension Layers                                                   |
| DimsColour                   | 2             | Dimension colour                                                                       |
| ViewPortLayerName            | VIEWPORTS     | Layer name for Viewport                                                                |
| ViewPortLayerColour          | BLUE          | Viewport Colour                                                                        |
| ViewPortEntitiesLayerName    | VIEWPORT_ENTS | Viewport layout space border & text layer                                              |
| ViewPortEntitiesLayerColour  | GREEN         | Viewport layout space border & text colour                                             |
| DefaultBorderVisibility      | ON            | Border visibility state                                                                |
| DefaultScaleTextVisibility   | ON            | Scale Text visibility state                                                            |
| DefaultNameTextVisibility    | ON            | Name Text visibility state                                                             |
| DefaultHidePlot              | ON            |                                                                                        |
| DefaultMviewBorderVisibility | ON            | Viewport Boundary visible in Paper Space by default                                    |
| <b>DrawingUnits</b>          |               |                                                                                        |
| ModelSpaceUnits              | MM            | Model Space & Paper Space units can be metres, millimetres, feet or inches             |
| PaperSpaceUnits              | MM            |                                                                                        |
| <b>ViewPortScale</b>         |               |                                                                                        |
| NumOfScales                  | 9             | Number of scales in the list, increase this if additional scales are added to the list |
| Scale1                       | 1:1           |                                                                                        |
| Scale2                       | 1:2           |                                                                                        |
| Scale3                       | 1:5           |                                                                                        |
| Scale4                       | 1:10          |                                                                                        |
| Scale5                       | 1:20          |                                                                                        |
| Scale6                       | 1:50          |                                                                                        |
| Scale7                       | 1:100         |                                                                                        |
| Scale8                       | 1:200         |                                                                                        |
| Scale9                       | 1:500         |                                                                                        |
| <b>MetricViewPortScale</b>   |               |                                                                                        |
| NumOfScales                  | 9             | Number of scales in the list, increase this if additional scales are added to the list |
| Scale1                       | 1:1           |                                                                                        |
| Scale2                       | 1:2           |                                                                                        |
| Scale3                       | 1:5           |                                                                                        |
| Scale4                       | 1:10          |                                                                                        |
| Scale5                       | 1:20          |                                                                                        |
| Scale6                       | 1:50          |                                                                                        |
| Scale7                       | 1:100         |                                                                                        |
| Scale8                       | 1:200         |                                                                                        |
| Scale9                       | 1:500         |                                                                                        |

### ImperialViewPortScale

|             |         |                                                                                        |
|-------------|---------|----------------------------------------------------------------------------------------|
| NumOfScales | 5       | Number of scales in the list, increase this if additional scales are added to the list |
| Scale1      | 1:1/16" |                                                                                        |
| Scale2      | 1:1/8"  |                                                                                        |
| Scale3      | 1:1/4"  |                                                                                        |
| Scale4      | 1:1/2"  |                                                                                        |
| Scale5      | 1:3/8"  |                                                                                        |

## LayerAliasManager

|        |   |                |
|--------|---|----------------|
| Status | 0 | Not applicable |
|--------|---|----------------|

## PaperSizes

Stores the Name of the Paper size (or Custom) the paper's width and height, and whether it is imperial (0) or metric (1)

|                    |            |                                                                                                            |
|--------------------|------------|------------------------------------------------------------------------------------------------------------|
| NumberOfPaperSizes | 10         | Number of paper sizes available in the configuration, increase this if additional paper sizes are required |
| PaperSize1         | A0         |                                                                                                            |
| PaperSize2         | A1         |                                                                                                            |
| PaperSize3         | A2         |                                                                                                            |
| PaperSize4         | A3         |                                                                                                            |
| PaperSize5         | A4         |                                                                                                            |
| PaperSize6         | Letter     |                                                                                                            |
| PaperSize7         | Legal      |                                                                                                            |
| PaperSize8         | Poster     |                                                                                                            |
| PaperSize9         | Custom(mm) |                                                                                                            |
| PaperSize10        | Custom(in) |                                                                                                            |
| PaperWidth1        | 1188       | Paper Width for the corresponding paper size above                                                         |
| PaperWidth2        | 840        |                                                                                                            |
| PaperWidth3        | 594        |                                                                                                            |
| PaperWidth4        | 420        |                                                                                                            |
| PaperWidth5        | 210        |                                                                                                            |
| PaperWidth6        | 11.94      |                                                                                                            |
| PaperWidth7        | 25         |                                                                                                            |
| PaperWidth8        | 60         |                                                                                                            |
| PaperWidth9        | 0          |                                                                                                            |
| PaperWidth10       | 0          |                                                                                                            |
| PaperHeight1       | 840        | Paper Height for the corresponding paper size above                                                        |
| PaperHeight2       | 594        |                                                                                                            |
| PaperHeight3       | 420        |                                                                                                            |
| PaperHeight4       | 297        |                                                                                                            |
| PaperHeight5       | 297        |                                                                                                            |
| PaperHeight6       | 13         |                                                                                                            |
| PaperHeight7       | 10         |                                                                                                            |
| PaperHeight8       | 40         |                                                                                                            |
| PaperHeight9       | 0          |                                                                                                            |
| PaperHeight10      | 0          |                                                                                                            |
| PaperUnits1        | 1          |                                                                                                            |
| PaperUnits2        | 1          |                                                                                                            |
| PaperUnits3        | 1          |                                                                                                            |
| PaperUnits4        | 1          |                                                                                                            |
| PaperUnits5        | 1          |                                                                                                            |
| PaperUnits6        | 0          |                                                                                                            |
| PaperUnits7        | 0          |                                                                                                            |
| PaperUnits8        | 0          |                                                                                                            |
| PaperUnits9        | 1          |                                                                                                            |
| PaperUnits10       | 0          |                                                                                                            |

## DefaultScales

|                |       |                                                                                        |
|----------------|-------|----------------------------------------------------------------------------------------|
| NumberOfScales | 20    | Number of scales in the list, increase this if additional scales are added to the list |
| Scale1         | 1:1   |                                                                                        |
| Scale2         | 1:2   |                                                                                        |
| Scale3         | 1:5   |                                                                                        |
| Scale4         | 1:10  |                                                                                        |
| Scale5         | 1:20  |                                                                                        |
| Scale6         | 1:25  |                                                                                        |
| Scale7         | 1:50  |                                                                                        |
| Scale8         | 1:75  |                                                                                        |
| Scale9         | 1:100 |                                                                                        |

|         |        |
|---------|--------|
| Scale10 | 1:200  |
| Scale11 | 1:250  |
| Scale12 | 1:500  |
| Scale13 | 1:750  |
| Scale14 | 1:1000 |
| Scale15 | 1:1250 |
| Scale16 | 1:1500 |
| Scale17 | 1:1750 |
| Scale18 | 1:2000 |
| Scale19 | 1:2500 |
| Scale20 | 1:5000 |

## LinearUnits

|                          |                |                                                |
|--------------------------|----------------|------------------------------------------------|
| NumberOfLinearUnits      | 5              | Number of types of linear units supported      |
| NumberOfLinearVariations | 9              | Number of linear variations supported per type |
| LUnit1                   | Scientific     |                                                |
| LUnit1_1                 | 0E             |                                                |
| LUnit1_2                 | 0.0E+01        |                                                |
| LUnit1_3                 | 0.00E+01       |                                                |
| LUnit1_4                 | 0.000E+01      |                                                |
| LUnit1_5                 | 0.0000E+01     |                                                |
| LUnit1_6                 | 0.00000E+01    |                                                |
| LUnit1_7                 | 0.000000E+01   |                                                |
| LUnit1_8                 | 0.0000000E+01  |                                                |
| LUnit1_9                 | 0.00000000E+01 |                                                |
| LUnit2                   | Decimal        |                                                |
| LUnit2_1                 | 0              |                                                |
| LUnit2_2                 | 0.0            |                                                |
| LUnit2_3                 | 0.00           |                                                |
| LUnit2_4                 | 0.000          |                                                |
| LUnit2_5                 | 0.0000         |                                                |
| LUnit2_6                 | 0.00000        |                                                |
| LUnit2_7                 | 0.000000       |                                                |
| LUnit2_8                 | 0.0000000      |                                                |
| LUnit2_9                 | 0.00000000     |                                                |
| LUnit3                   | Engineering    |                                                |
| LUnit3_1                 | 0'0"           |                                                |
| LUnit3_2                 | 0'0.0"         |                                                |
| LUnit3_3                 | 0'0.00"        |                                                |
| LUnit3_4                 | 0'0.000"       |                                                |
| LUnit3_5                 | 0'0.0000"      |                                                |
| LUnit3_6                 | 0'0.00000"     |                                                |
| LUnit3_7                 | 0'0.000000"    |                                                |
| LUnit3_8                 | 0'0.0000000"   |                                                |
| LUnit3_9                 | 0'0.00000000"  |                                                |
| LUnit4                   | Architectural  |                                                |
| LUnit4_1                 | 0'0"           |                                                |
| LUnit4_2                 | 0'0-1/2"       |                                                |
| LUnit4_3                 | 0'0-1/4"       |                                                |
| LUnit4_4                 | 0'0-1/8"       |                                                |
| LUnit4_5                 | 0'0-1/16"      |                                                |
| LUnit4_6                 | 0'0-1/32"      |                                                |
| LUnit4_7                 | 0'0-1/64"      |                                                |
| LUnit4_8                 | 0'0-1/128"     |                                                |
| LUnit4_9                 | 0'0-1/256"     |                                                |
| LUnit5                   | Fractional     |                                                |
| LUnit5_1                 | 0              |                                                |
| LUnit5_2                 | 0-1/2          |                                                |
| LUnit5_3                 | 0-1/4          |                                                |
| LUnit5_4                 | 0-1/8          |                                                |
| LUnit5_5                 | 0-1/16         |                                                |
| LUnit5_6                 | 0-1/32         |                                                |
| LUnit5_7                 | 0-1/64         |                                                |
| LUnit5_8                 | 0-1/128        |                                                |

|                           |                                            |                                                 |
|---------------------------|--------------------------------------------|-------------------------------------------------|
| LUnit5_9                  | 0-1/256                                    |                                                 |
| <b>AngularUnits</b>       | Number of types of angular units supported |                                                 |
| NumberOfAngularUnits      | 5                                          | Number of angular variations supported per type |
| NumberOfAngularVariations | 9                                          |                                                 |
| AUnit1                    | Decimal                                    |                                                 |
| AUnit1_1                  | 0                                          |                                                 |
| AUnit1_2                  | 0.0                                        |                                                 |
| AUnit1_3                  | 0.00                                       |                                                 |
| AUnit1_4                  | 0.000                                      |                                                 |
| AUnit1_5                  | 0.0000                                     |                                                 |
| AUnit1_6                  | 0.00000                                    |                                                 |
| AUnit1_7                  | 0.000000                                   |                                                 |
| AUnit1_8                  | 0.0000000                                  |                                                 |
| AUnit1_9                  | 0.00000000                                 |                                                 |
| AUnit2                    | Deg/Min/Sec                                |                                                 |
| AUnit2_1                  | 0d                                         |                                                 |
| AUnit2_2                  | 0d00"                                      |                                                 |
| AUnit2_3                  | 0d00'00"                                   |                                                 |
| AUnit2_4                  | 0d00'00.0"                                 |                                                 |
| AUnit2_5                  | 0d00'00.00"                                |                                                 |
| AUnit2_6                  | 0d00'00.000"                               |                                                 |
| AUnit2_7                  | 0d00'00.0000"                              |                                                 |
| AUnit2_8                  | 0d00'00.00000"                             |                                                 |
| AUnit2_9                  | 0d00'00.000000"                            |                                                 |
| AUnit3                    | Grads                                      |                                                 |
| AUnit3_1                  | 0g                                         |                                                 |
| AUnit3_2                  | 0.0g                                       |                                                 |
| AUnit3_3                  | 0.00g                                      |                                                 |
| AUnit3_4                  | 0.000g                                     |                                                 |
| AUnit3_5                  | 0.0000g                                    |                                                 |
| AUnit3_6                  | 0.00000g                                   |                                                 |
| AUnit3_7                  | 0.000000g                                  |                                                 |
| AUnit3_8                  | 0.0000000g                                 |                                                 |
| AUnit3_9                  | 0.00000000g                                |                                                 |
| AUnit4                    | Radians                                    |                                                 |
| AUnit4_1                  | 0r                                         |                                                 |
| AUnit4_2                  | 0.0r                                       |                                                 |
| AUnit4_3                  | 0.00r                                      |                                                 |
| AUnit4_4                  | 0.000r                                     |                                                 |
| AUnit4_5                  | 0.0000r                                    |                                                 |
| AUnit4_6                  | 0.00000r                                   |                                                 |
| AUnit4_7                  | 0.000000r                                  |                                                 |
| AUnit4_8                  | 0.0000000r                                 |                                                 |
| AUnit4_9                  | 0.00000000r                                |                                                 |
| AUnit5                    | Surveyor                                   |                                                 |
| AUnit5_1                  | N0dE                                       |                                                 |
| AUnit5_2                  | N0d00'E                                    |                                                 |
| AUnit5_3                  | N0d00'00"E                                 |                                                 |
| AUnit5_4                  | N0d00'00.0"E                               |                                                 |
| AUnit5_5                  | N0d00'00.00"E                              |                                                 |
| AUnit5_6                  | N0d00'00.000"E                             |                                                 |
| AUnit5_7                  | N0d00'00.0000"E                            |                                                 |
| AUnit5_8                  | N0d00'00.00000"E                           |                                                 |
| AUnit5_9                  | N0d00'00.000000"E                          |                                                 |
| <b>DrawingSetup</b>       |                                            |                                                 |
| NumberOfDwgSetups         | 10                                         | Number of Drawing Setups supported in the       |
| Create Setup1             | CADS A0 Standard Setup                     | Layout dialog. Only one of the Drawing          |
| PaperWidth1               | 1188                                       | Setups is shown below, the other nine have      |
| PaperHeight1              | 840                                        | been removed from the list.                     |
| PaperName1                | 1                                          |                                                 |
| MarginL1                  | 0                                          |                                                 |
| MarginR1                  | 0                                          |                                                 |
| MarginT1                  | 0                                          |                                                 |

|                  |               |
|------------------|---------------|
| MarginB1         | 0             |
| Tilemode1        | 1             |
| InsertMode1      | 0             |
| LUnits1          | 2             |
| LPrec1           | 2             |
| AUnits1          | 1             |
| APrec1           | 2             |
| TitleFile1       | A0CADS.DWG    |
| TitleLayer1      | TITLE-BLK     |
| TitleInsertX1    | 0             |
| TitleInsertY1    | 0             |
| TitleInsertZ1    | 0             |
| TitleUseMargins1 | 0             |
| AttrFile1        |               |
| AttrLayer1       | ATTRIBUTE-BLK |
| AttrInsertX1     | 0             |
| AttrInsertY1     | 0             |
| AttrInsertZ1     | 0             |
| AttrUseMargins1  | 0             |
| AngDir1          | 0             |
| Zero1            | 0             |
| Measurement1     | 1             |
| ListPosition1    | 0             |

## AboutBox

|                  |         |
|------------------|---------|
| StaticSlideName  | cadslgo |
| NumberOfSlides   | 20      |
| SlideNamePrefix  | logo    |
| SlideLibraryName | logo    |
| AnimationSpeed   | 1.0     |

## Misc

0 - ignore this, do the test in de\_main.c

1 - Automatically do the big screen one (i.e they might have a small screen, but small font so override test)

|                  |   |                         |
|------------------|---|-------------------------|
| disk_IsBigScreen | 0 |                         |
| WarksCC          | 0 | Company specific config |

## GroupLayering

|                     |             |                                                  |
|---------------------|-------------|--------------------------------------------------|
| LayerDefPathAndName | vpm-lay.txt | File which contains the layer names for CADS VPM |
|---------------------|-------------|--------------------------------------------------|

## PagesSizesMetric

|                   |                              |
|-------------------|------------------------------|
| NumberOfPageSizes | 5                            |
| PlotStyleTable    | None                         |
| PageSizeTitle1    | A4                           |
| PageSizeTitle2    | A3                           |
| PageSizeTitle3    | A2                           |
| PageSizeTitle4    | A1                           |
| PageSizeTitle5    | A0                           |
| PageSizeBlock1    | A4cads.dwg                   |
| PageSizeBlock2    | A3cads.dwg                   |
| PageSizeBlock3    | A2cads.dwg                   |
| PageSizeBlock4    | A1cads.dwg                   |
| PageSizeBlock5    | A0cads.dwg                   |
| PageSizePlotter1  | None                         |
| PageSizePlotter2  | None                         |
| PageSizePlotter3  | None                         |
| PageSizePlotter4  | None                         |
| PageSizePlotter5  | None                         |
| PaperSize1        | ISO_A4_(210.00_x_297.00_MM)  |
| PaperSize2        | ISO_A3_(297.00_x_420.00_MM)  |
| PaperSize3        | ISO_A2_(420.00_x_594.00_MM)  |
| PaperSize4        | ISO_A1_(594.00_x_841.00_MM)  |
| PaperSize5        | ISO_A0_(841.00_x_1189.00_MM) |
| PageOrientation1  | Portrait                     |
| PageOrientation2  | Landscape                    |
| PageOrientation3  | Landscape                    |

|                           |                               |
|---------------------------|-------------------------------|
| PageOrientation4          | Landscape                     |
| PageOrientation5          | Landscape                     |
| PagePlotStyleTable1       | None                          |
| PagePlotStyleTable2       | None                          |
| PagePlotStyleTable3       | None                          |
| PagePlotStyleTable4       | None                          |
| PagePlotStyleTable5       | None                          |
| <b>PagesSizesImperial</b> |                               |
| NumberOfPageSizes         | 4                             |
| PlotStyleTable            | None                          |
| PageSizeTitle1            | 11x17                         |
| PageSizeTitle2            | 17x22                         |
| PageSizeTitle3            | 24x36                         |
| PageSizeTitle4            | 36x48                         |
| PageSizeBlock1            | 11x17cads.dwg                 |
| PageSizeBlock2            | 17x22cads.dwg                 |
| PageSizeBlock3            | 24x36cads.dwg                 |
| PageSizeBlock4            | 36x48cads.dwg                 |
| PageSizePlotter1          | None                          |
| PageSizePlotter2          | None                          |
| PageSizePlotter3          | None                          |
| PageSizePlotter4          | None                          |
| PaperSize1                | ANSI_B_(11.00_x_17.00_Inches) |
| PaperSize2                | ANSI_C_(17.00_x_22.00_Inches) |
| PaperSize3                | ARCH_D_(24.00_x_36.00_Inches) |
| PaperSize4                | ARCH_E_(36.00_x_48.00_Inches) |
| PageOrientation1          | Landscape                     |
| PageOrientation2          | Landscape                     |
| PageOrientation3          | Landscape                     |
| PageOrientation4          | Landscape                     |
| PagePlotStyleTable1       | None                          |
| PagePlotStyleTable2       | None                          |
| PagePlotStyleTable3       | None                          |
| PagePlotStyleTable4       | None                          |
| PagePlotStyleTable5       | None                          |