



Draw Guide

Chapter 11

Advanced Draw Techniques

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Note

Everything sent to a mailing list, including your email address and any other personal information that is written in the message, is publicly archived and cannot be deleted.

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Using LibreOffice on macOS

Some keystrokes and menu items are different on macOS from those used in Windows and Linux. The table below gives some common substitutions for the instructions in this document. For a more detailed list, see the application Help.

<i>Windows or Linux</i>	<i>macOS equivalent</i>	<i>Effect</i>
Tools > Options menu	LibreOffice > Preferences	Access setup options
Right-click	Control +click or right-click depending on computer setup	Open a context menu
Ctrl (Control)	⌘ (Command)	Used with other keys
F5	Shift + ⌘ + F5	Open the Navigator
F11	⌘ + T	Open the sidebar Styles deck

Contents

Copyright.....	2
Contributors.....	2
To This Edition.....	2
To Previous Editions.....	2
Feedback.....	2
Publication date and software version.....	2
Using LibreOffice on macOS.....	2
Multi-page documents.....	5
Page pane.....	5
Master pages.....	7
Master page view.....	7
Creating master pages.....	8
Renaming master pages.....	8
Deleting master pages.....	8
Inserting fields.....	8
Editing field format.....	10
Assigning master pages.....	10
Master pages from templates.....	11
Templates.....	12
Creating templates.....	12
Using templates.....	14
Quick Start Center.....	14
Templates dialog.....	14
Open file dialog.....	15
Default template.....	15
Setting template as default.....	15
Resetting default.....	16
Editing templates.....	16
Editing.....	16
Updating documents from modified template.....	17
Organizing templates.....	17
Creating template <i>folders</i>	18
Renaming template folders.....	18
Deleting template folders.....	19
Moving templates.....	19
Deleting templates.....	20
Importing templates.....	20
Exporting templates.....	21
Multiple layers.....	21
Default layers.....	22
Inserting layers.....	22
Modifying layers.....	23
Working with layers.....	23
Selecting a layer.....	23
Hiding layers.....	23
Showing hidden layers.....	23
Locking layers.....	23

Unlocking layers.....	24
Renaming layers.....	24
Deleting layers.....	24
Moving objects layer to layer.....	24
Dimensioning.....	24
Configuring dimensioning.....	25
Drawing object styles.....	25
Dimension line dialog.....	26
Dimensioning <i>options</i>	26
Guide selection handles.....	28
Dimensioning objects.....	28
Drawing to scale.....	29
Views.....	30
Gallery.....	30
Using the Gallery.....	31
Creating themes and adding images.....	32
Deleting gallery themes and images.....	33
Updating the Gallery.....	33
Renaming themes.....	33
Using drawing objects with Gallery.....	34
Adding complete themes.....	34
Colors.....	34
Changing colors.....	35
Color Bar.....	35
Area fill colors.....	35
Lines or border colors.....	38
Object text.....	39
Creating colors.....	40
Deleting colors.....	41
Bézier curves.....	42
Drawing Bézier curves.....	42
Edit Points tools.....	43
Adding comments to a drawing.....	45
Connecting and breaking lines.....	46
Coordinate system.....	46
X and Y axes.....	46
Workspace.....	46
Object position.....	46
Accuracy.....	47

Multi-page documents

Draw documents, like Impress presentation documents, can consist of multiple pages. This allows you to create a drawing that has several sections and stored as one file on a computer.

When pages are inserted into a drawing, they are automatically named as Slide 1, Slide 2, and so on in the Navigator. As you change page order, the pages are automatically renumbered. However, if you want to easily identify each page, then it is recommended to give each page a memorable name.

Page pane

By default the **Page Pane** (Figure 1) appears docked on the left of the workspace when you open Draw and shows every page in the drawing as a thumbnail. If the **Page Pane** is not displayed, go to **View > Page Pane** on the main menu bar.



Note

The **Page Pane** is called **Pages** when it is in its docked position on the left of the workspace.

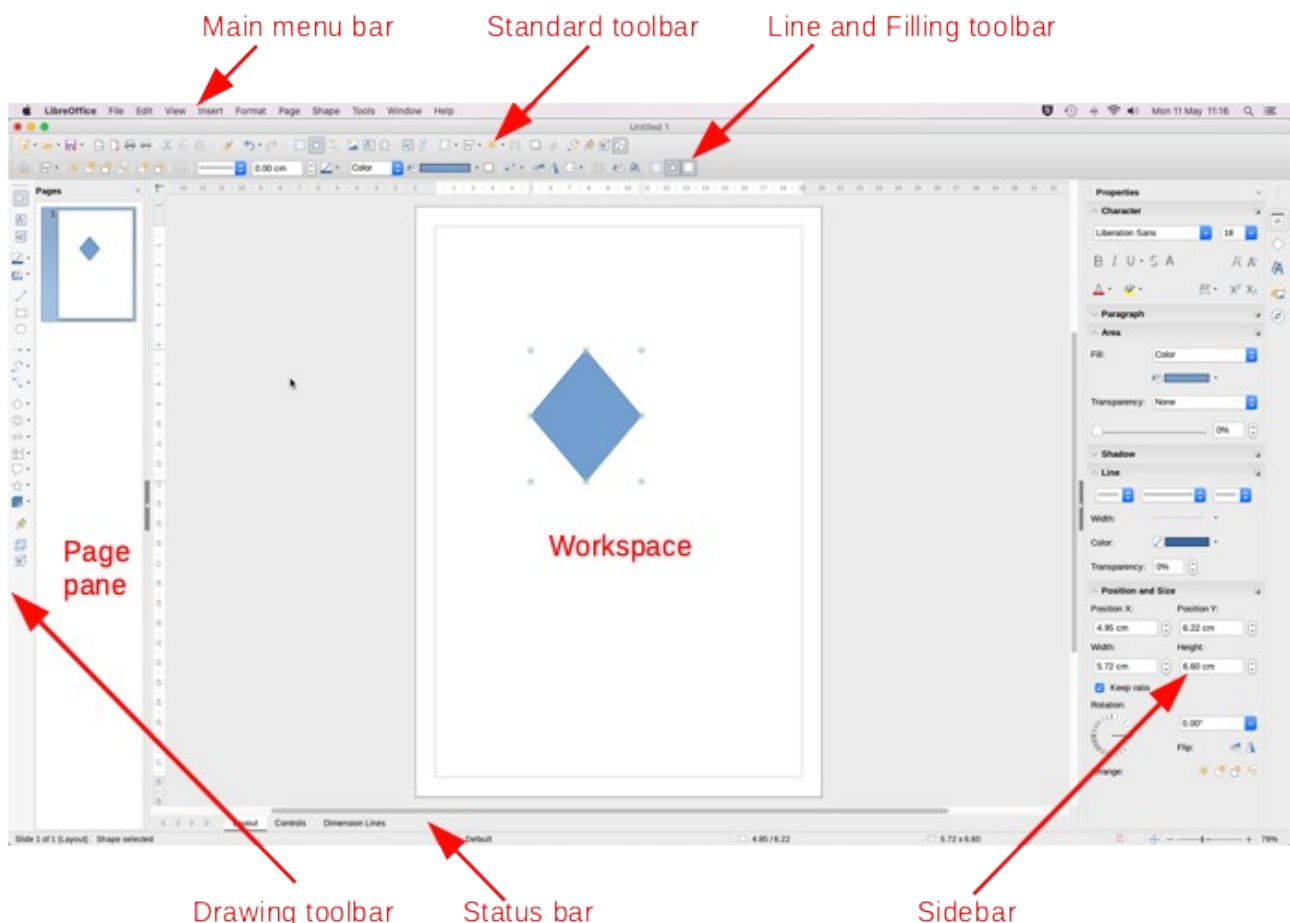


Figure 1: Draw main window showing Page Pane, Workspace and Sidebar

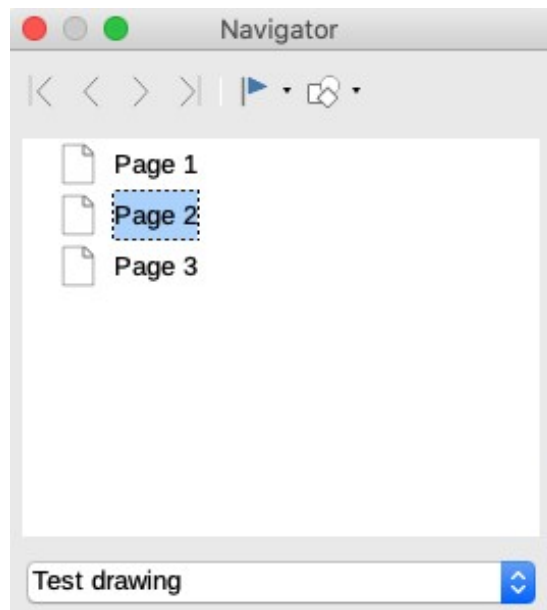


Figure 2: Navigator dialog

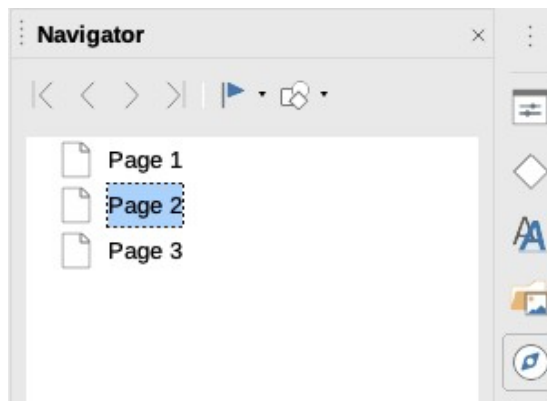


Figure 3: Navigator deck on Sidebar

The **Page Pane** is used as follows to help you control pages in your drawing:

- Select a page using one of the following methods and the page will appear in the **Workspace** for editing:
 - Click on a page thumbnail in the **Page Pane**.
 - Press the **F5** key to open the **Navigator** dialog (Figure 2).
 - Go to **View > Navigator** on the main menu bar to open the **Navigator** dialog (Figure 2).
 - Click on the **Navigator** icon on the Sidebar to open the **Navigator** deck (Figure 3).
- Select a thumbnail in the **Page Pane**, then drag and drop the thumbnail to change the page order in the document.
- Click and drag on the separator line between the **Page Pane** and **Workspace** to change the width of the **Page Pane**.
- Click on the middle of the separator line to show or hide the **Page Pane**.
- Press and hold the **Ctrl** key, then double-click in the title bar of the **Page Pane** to undock it and turn it into a floating window.
- Click in the title bar and drag the **Page Pane** to turn it into a floating window.
- Press and hold the **Ctrl** key, then double-click in the title bar of the floating **Page Pane** to dock it back into its default position on the left of the workspace.

- Click in the title bar and drag the **Page Pane** to return it to its docked position on the left side of the **Workspace**.
- Right-click in the **Page Pane** and select **New Page** from the context menu to insert a page into your drawing.
- Go to **Page** on the main menu bar to carry out one of the following actions listed in the context menu:
 - Select **New Page** to insert a new page.
 - Select **Duplicate Page** to insert a duplicate page. The duplicate page will be a duplicate of the page selected in the **Page Pane**.
 - Select **Insert Page from File** and the **Insert File** dialog opens. Navigate to the folder where the file is located, select then click on **Insert**.
 - Select **Rename Page** and the selected page in the **Page Pane** is renamed.
 - Select **Delete Page** and the selected page in the **Page Pane** is deleted.
- Right-click on a page in the **Page Pane** and select **New Page**, **Delete Page** or **Rename Page** from the context menu.
- Select **Page > Move** on the main menu bar and select **Page to Start**, **Page Up**, **Page Down** and **Page to End** from the context menu to move a selected page in the page order.
- Select **Page > Navigate** on the main menu bar and select **To First Page**, **To Previous Page**, **To Next Page** and **To Last Page** from the context menu to select a page for editing.

Master pages

A master page is a page that is used as the starting point for other pages in your drawing. It is similar to a page style in Writer and controls the basic formatting of all pages based upon it. A drawing can have more than one master page so that you can assign a different look to pages in your drawing, for example title page, contents page, and drawing pages.

A master page has a defined set of characteristics, including the background color, graphic, or gradient; objects (such as logos, decorative lines, and other graphics) in the background, the formatting of text, blocks of standard text, and insert fields such as page numbering, date, and filename.



Note

LibreOffice uses interchangeable terms for one concept: slide master, master slide, and master page. All refer to a page which is used to create other pages. When searching for information in Draw Help, it may be necessary to use alternative search terms.

Master page view

To add text, objects and fields to a master page, go to **View > Master** on the main menu bar to open the master page view and open the **Master View** toolbar (Figure 4). If this toolbar does not open, go to **View > Toolbars > Master View** on the main menu bar.

To return to normal page mode, click on **Close Master View** in the **Master View** toolbar or go to **View > Normal** on the main menu bar.

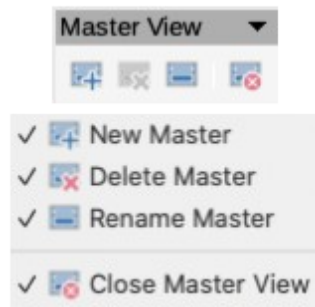


Figure 4: Master View toolbar

Creating master pages

Each drawing you create already has a default master page, but you can create extra master pages to change the look of some of the pages in your multi-page drawing.

- 1) Go to **View > Master** on the main menu bar to open the master page view.
- 2) Click on the **New Master** icon in the **Master View** toolbar (Figure 4) to create a new master page. The new master page is automatically selected allowing you to add a new set of items to create a new look for your pages.

Renaming master pages

Each new master page created has the default name of Default 1, Default 2, and so on. It is recommended to rename your new master page with a more meaningful name. The default master page that was created when you first created your drawing can also be renamed.

- 1) Go to **View > Master** on the main menu bar to open the master page view.
- 2) Right-click on a master page in the **Page Pane** and select **Rename Page** from the context menu or click on the **Rename Master** icon on the **Master View** toolbar (Figure 4). This opens the **Rename Master Slide** dialog (Figure 5) where you can type a new name.
- 3) Click **OK** to save the master page with its new name and close the dialog.

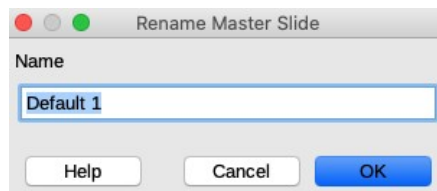


Figure 5: Rename Master Slide dialog

Deleting master pages

The **Delete** option and **Delete** icon are only available when there is more than one master page in your drawing. You cannot delete the default master page that was created when you first created your drawing.

- 1) Go to **View > Master** on the main menu bar to open the master page view.
- 2) Select and right-click on a master page in the **Page Pane** and select **Delete Page** from the context menu or click on the **Delete Master** icon in the **Master View** toolbar (Figure 4).

Inserting fields

You can insert fields on each master page by going to **Insert > Field** on the main menu bar and selecting a field from the context menu. The following fields can be inserted into a master page.

- **Date (fixed)** – inserts the current date into the master page as a fixed field. The date is not automatically updated.
- **Date (variable)** – inserts the current date into the master page as a variable field. The date is automatically updated when you open the file.
- **Time (fixed)** – inserts the current time into the master page as a fixed field. The time is not automatically updated.
- **Time (variable)** – inserts the current time into the master page as a variable field. The time is automatically updated when you open the file.
- **Author** – inserts the first and last names listed in the LibreOffice user data into the active page. Go to **Tools > Options > LibreOffice > User Data** on the main menu bar to enter your user data into LibreOffice.
- **Page Number** – inserts the page number into every page of the drawing. To change the number format, go to **Page > Properties** on the main menu bar to open the **Page Setup** dialog (Figure 6). Click on the **Page** tab and select a number format from the drop-down list in **Layout Settings**.
- **Page Title** – inserts the page title. A page title is created in **Normal** view by going to **Page > Rename Page** on the main menu bar and entering a title in *Name* text box in the **Rename Page** dialog (Figure 7) that opens.
- **Page Count** – inserts the total number of pages in your drawing.
- **File name** – inserts the name of the active file. The name only appears after you save the file.

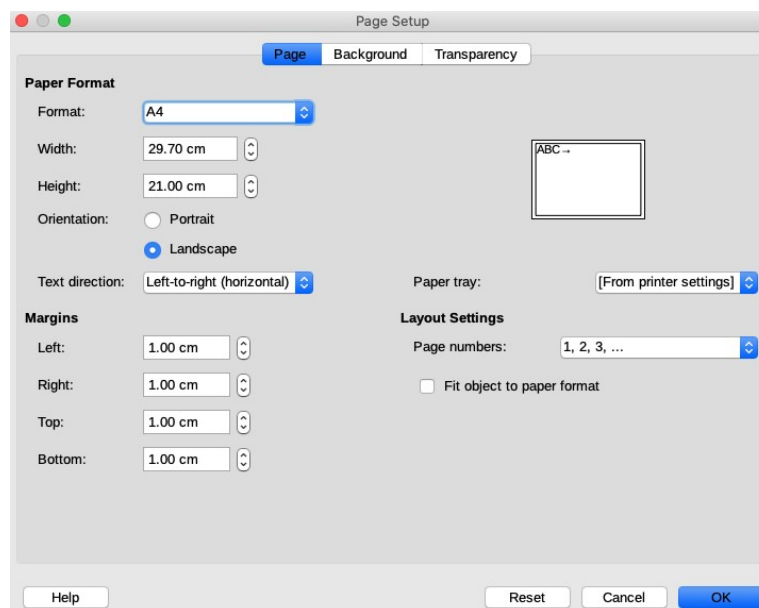


Figure 6: Page Setup dialog

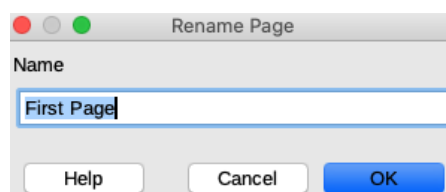


Figure 7: Rename Page dialog



Figure 8: Edit Field dialog

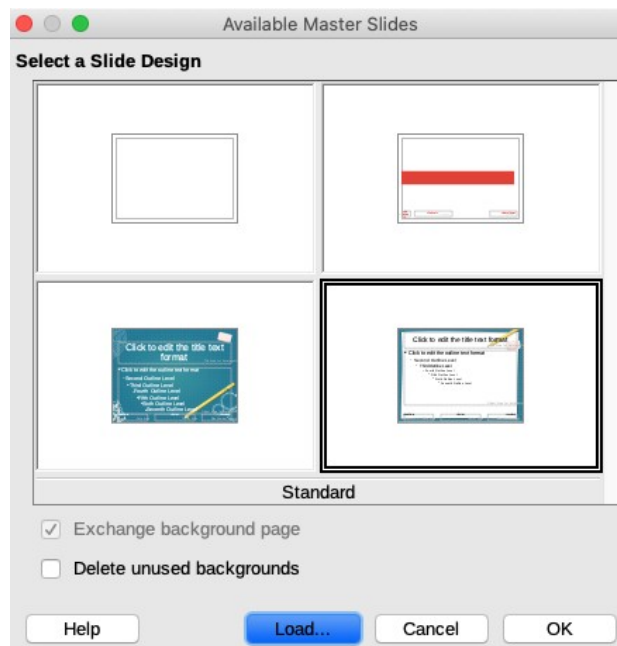


Figure 9: Available Master Slides dialog

Editing field format

The format of **Date**, **Time**, **Author** or **File** name fields is edited as follows on a master slide:

- 1) Click on the field to select it.
- 2) Select the field content.
- 3) Go to **Edit > Fields...** on the main menu bar to open the **Edit Field** dialog (Figure 8).
- 4) Select an option from the drop down lists for **Language** and **Format**.
- 5) Click **OK** to save your changes and close the dialog.

Assigning master pages

When your drawing has more than one master page, you can assign different master pages to different pages.

- 1) Go to **View > Normal** on the main menu bar and select the page in the **Page Pane** you want to assign a new master page to it.
- 2) Right-click on the page in the **Workspace** and select **Change Slide Master** from the context menu to open the **Available Master Slides** dialog (Figure 9).

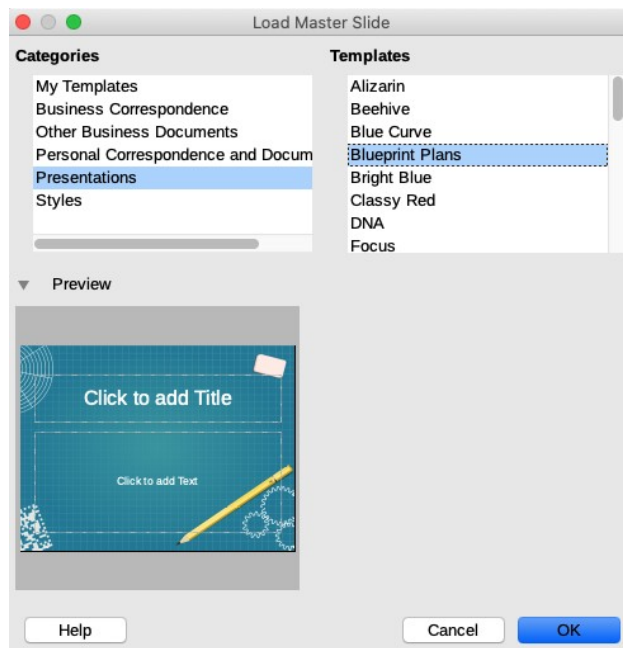


Figure 10: Load Master Slide dialog

- 3) Select the master page design you want to use in **Select a Slide Design**.
- 4) If necessary, select the *Exchange background page* option to use the selected master page for all pages in the drawing.
- 5) If necessary, select the *Delete unused backgrounds* option to delete any master pages shown in **Select a Slide Design** that have not been assigned to a page.
- 6) Click **OK** to assign the selected master page to your page and close the dialog.

Master pages from templates

You can use master pages, which are defined in templates available in LibreOffice. Any master pages loaded into your drawing are adapted to the page size of your drawing. This may cause some images to be stretched when adapted to fit your drawing page size.

- 1) Go to **View > Master** on the main menu bar and open **Master** view in your drawing.
- 2) Right click on the master page displayed in your drawing and select **Change Master Slide** from the context menu to open the **Available Master Slides** dialog (Figure 9)
- 3) Click on **Load...** in the **Available Master Slides** dialog (Figure 9) to open the **Load Master Slide** dialog (Figure 10).
- 4) Chose a template category from list displayed in **Categories**.
- 5) Choose a template from the list displayed in **Templates**. A preview of the selected template is displayed in **Preview**.
- 6) Click **OK** to close the **Load Master Slide** dialog and the **Available Master Slides** dialog opens displaying the template in **Select a Slide Design**.
- 7) Select the master page design you want to use in **Select a Slide Design**.
- 8) If necessary, select the *Exchange background page* option to use the selected master page for all pages in the drawing.
- 9) If necessary, select the *Delete unused backgrounds* option to delete any master pages shown in **Select a Slide Design** that have not been assigned to a page.
- 10) Click **OK** to assign the selected master page to your page and close the dialog.

Templates

A template is a special type of document that you use as a basis for creating other documents. For example, you can create a template for company drawings so that any new drawing has your company logo and name on the first page and any remaining pages in your drawing only show the company name.

Templates can contain anything that regular documents can contain, such as text, graphics, a set of styles, and user-specific setup information such as measurement units, language, the default printer, and toolbar and menu customization.

- You can create a specific template for any document type (text, spreadsheet, drawing, or presentation).
- If you do not specify a template when you start a new drawing or document, then the drawing or document is based on a set of properties that are hard coded in LibreOffice.
- You can create a default template for your drawings. See “*Default template*” on page 15 for more information.
- For more information on templates and templates from other sources, see the *Getting Started Guide Chapter 3 Using Styles and Templates*.



Note

Draw does not have any predefined templates when it is installed on a computer. However, you can install templates from other sources or create your own templates; these methods are described in the following sections.

Creating templates

- 1) Open the drawing that you want to use for a template, or open and edit a template that you want to use as a basis for your new template.
- 2) Add any extra content and styles or edit the content and styles in your drawing.

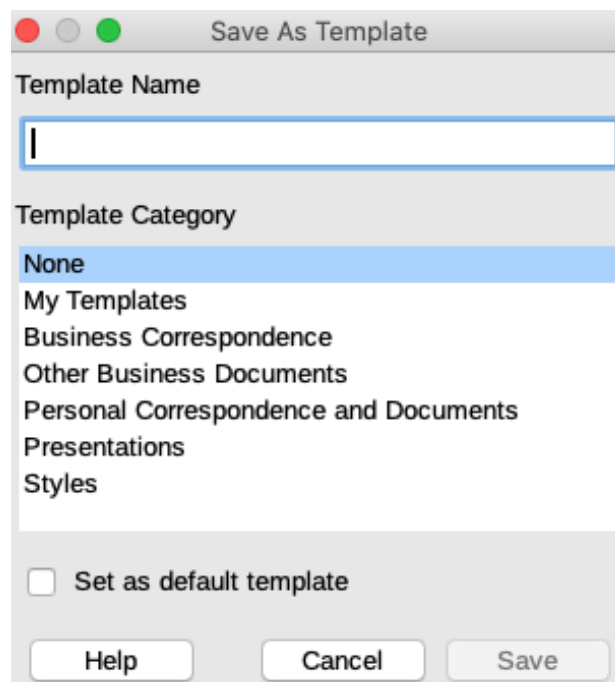


Figure 11: Save As Template dialog

- 3) Save your template using one of the following methods to open the **Save As Template** dialog (Figure 11):
 - Go to **File > Templates > Save As Template** on the main menu bar to open the **Save As Template**.
 - Click on the small triangle to the right of the **Save** icon on the **Standard** toolbar and select **Save as Template** on the context menu to open the **Save As Template**.
- 4) Enter a name for your template in the *Template Name* text box.
- 5) Select a category where you want to save your template in the *Template Category* box.
- 6) If you want the template to be used as the default template in Draw, then select the option *Set as default template*.
- 7) Click on **Save** to save your template and close the dialog.
- 8) Alternatively, go to **File > Save As** on the main menu bar to open the **Save as** dialog (Figure 12).
- 9) Navigate to the LibreOffice folder where templates are stored. Actual folder depends on your computer system and setup.
- 10) Enter a filename with the extension .otg in the **File name:** text box.
- 11) In the **File type:** drop down list, select **ODF Drawing Template (.otg)** as the file type.
- 12) Click on **Save** to save your template and close the dialog.



Note

When using the **Save as** dialog (Figure 12), you must use the LibreOffice templates folder for your template for the **Template Manager** to recognize and find your template.

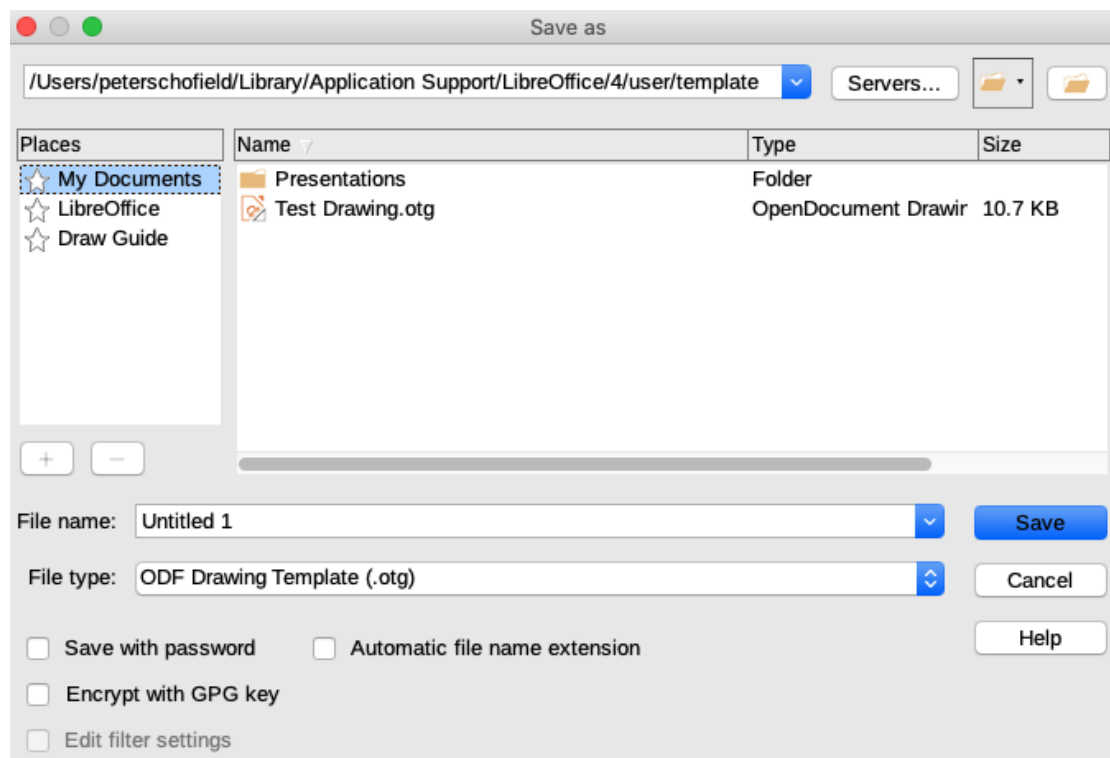


Figure 12: Save as dialog

Using templates

Quick Start Center

If LibreOffice is not open, create a new drawing using a template is as follows:

- 1) Start LibreOffice and click on **Templates** in the **Quick Start Center** to open a display of available templates for all LibreOffice applications.
- 2) Alternatively, if LibreOffice is not open, start LibreOffice and click on the small triangle to the right of **Templates** in the **Quick Start Center**, then select **Draw Templates** to open a display of available templates for Draw.

Templates dialog

Instead of using the default settings in LibreOffice to create a new drawing, use a template from the **Templates** dialog (Figure 13) as follows:

- 1) If Draw is already open, use one of the following methods to open the **Templates** dialog (Figure 13):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) From the *Filter* drop down lists for applications and category, select the template you want to use for your new drawing.
- 3) Click on **Open** to create a new drawing in Draw and close the dialog.

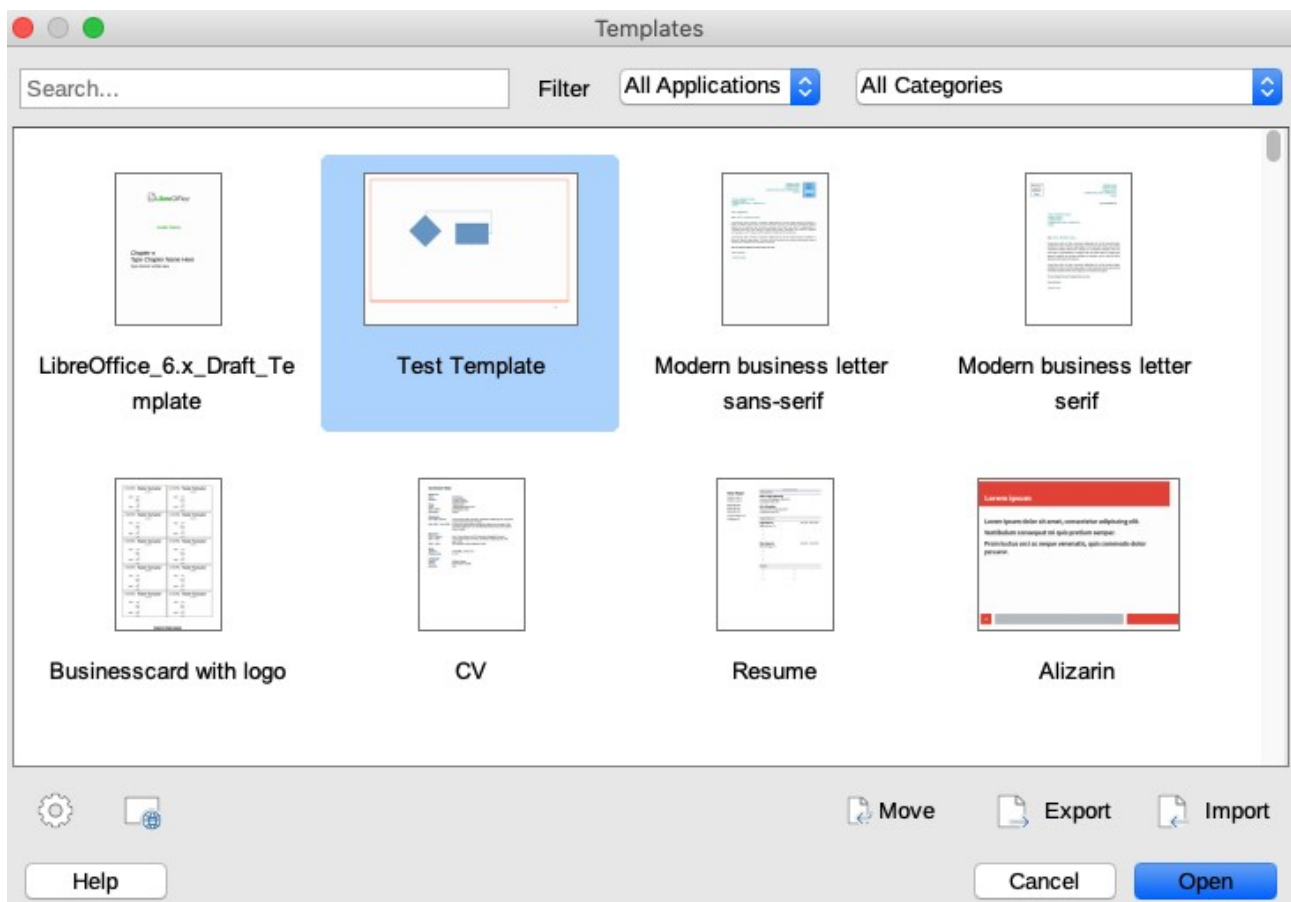


Figure 13: Templates dialog

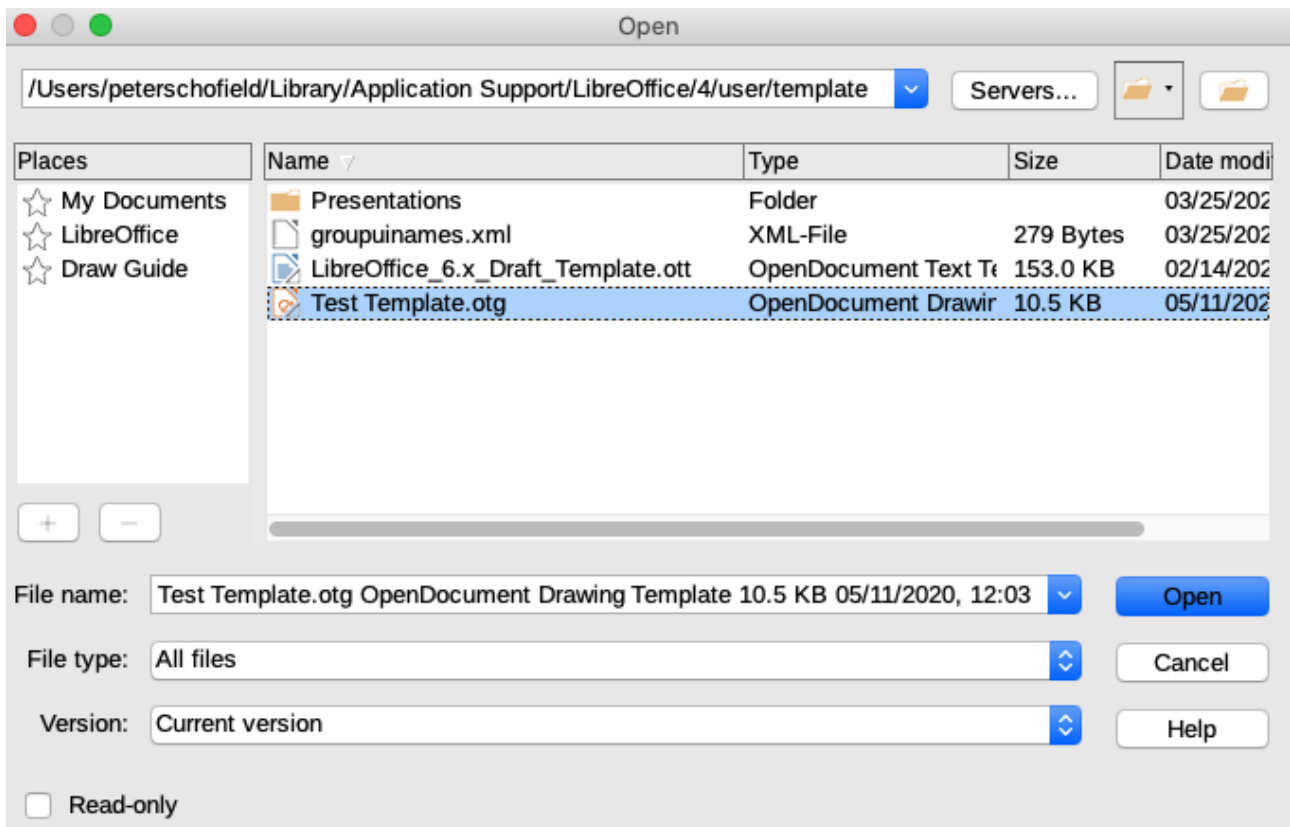


Figure 14: Open dialog

Open file dialog

If you know which folder contains the template you want to use for a new drawing, proceed as follows:

- 1) Go to **File > Templates > Open Template** on the main menu bar to open the **Open** dialog (Figure 14).
- 2) Navigate to the folder where the template is located.
- 3) Select the template you want to use.
- 4) Click on **Open** to open the template in Draw and close the dialog.
- 5) Go to **File > Save As** on the main menu bar to open the **Save as** dialog (Figure 12 on page 13).
- 6) Enter a filename using the extension **.odg** in the **File name:** text box.
- 7) In the **File type:** drop down list, select **ODF Drawing (.odg)** as the file type.
- 8) Click on **Save** to save your new drawing and close the dialog.

Default template

If you create a new drawing and do not select a template, LibreOffice creates the drawing using a set of properties that are hard coded in LibreOffice. However, you can set any drawing template to be the default template, even a template that you have created, so long as it is located in a category displayed in the **Templates** dialog (Figure 13 on page 14).

Setting template as default

Set a template as default for use with a new drawing is as follows:

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):

- Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the *Filter* drop down lists, select **Drawings** as the application and the template category where the template you want to use is located.
 - 3) Select the template.
 - 4) Right-click on the template and select **Set as default** from the context menu. There is no confirmation that the selected template has become the default template for new drawings. The default template is indicated by check mark at the top left corner of the template icon.
 - 5) Click on **Cancel** to close the dialog. The next time you create a new drawing, it will be created using the default template.



Note

If you have created a new drawing that you want to use as the default template, then you must save the drawing as a template first before you can use it as the default template. See “*Creating templates*” on page 12 for more information.

Resetting default

To reset Draw back to the LibreOffice default properties for new drawings:

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) Right-click on the default template. The default template is indicated by check mark at the top left corner of the template icon.
- 3) Select **Reset Default** from the context menu. There is no confirmation that Draw has been reset to using LibreOffice default properties when a new drawing is created.
- 4) Click on **Cancel** to close the dialog. The next time you create a new drawing, it will be created using the LibreOffice default properties.

Editing templates

You can edit template styles and content, and then, if you wish, reapply the template styles to drawings that were created from that template.



Note

You can only reapply styles. You cannot reapply content.

Editing

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Template Manager** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.

- 2) Locate the template you want to edit and select it.
- 3) Right click on the selected template and select **Edit** from the context menu. The template opens in Draw.
- 4) Edit the template just as you would any other drawing.
- 5) Go to **File > Save** on the main menu bar or use the keyboard shortcut **Ctrl+S** to save the template.
- 6) To save the edited template as a new template, see “*Creating templates*” on page 12 for more information.

Updating documents from modified template

The next time that you open a drawing that was created from the changed template, you will be asked to confirm whether you want to update the styles in your drawing to the formatting used in the modified template (Figure 15).

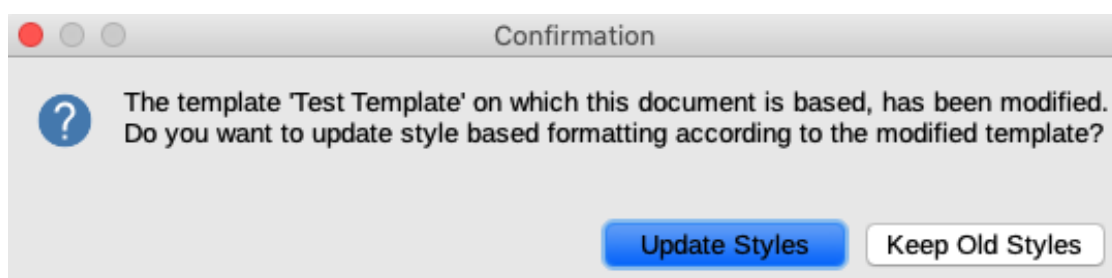


Figure 15: Confirmation dialog for style update

- Click **Update Styles** to update any styles in the document that have been changed in the template and close the confirmation dialog.
- Click **Keep Old Styles** if you do not want to update any styles in the document that have been changed in the template and close the confirmation dialog.



Note

If you select **Keep Old Styles**, then the confirmation dialog will not appear again the next time you open the document after changing the template it is based on. You will not get another chance to update the styles from the template.

Organizing templates

LibreOffice can only use templates that are in LibreOffice template folders (categories). You can create new LibreOffice template folders (categories) and use them to organize your templates. For example, separate categories for different projects or clients. You can also import and export templates.



Tip

The location of LibreOffice template folders varies with your computer operating system. To learn where the template folders are stored on your computer, go to **Tools > Options > LibreOffice > Paths** on the main menu bar.

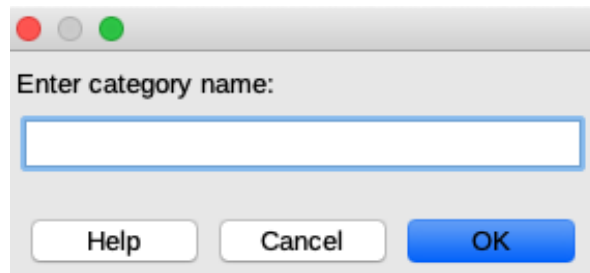


Figure 16: Template category name dialog

Creating template folders

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the **Filter** drop down lists, select *Drawing* as the application.
- 3) Click on the **Settings** icon and select **New Category** from the context menu.
- 4) Enter a name for the new category in the dialog that opens (Figure 16).
- 5) Click **OK** to save the new category as a new category (folder) in LibreOffice and close the dialog.



Note

You can not create a new sub-categories inside existing LibreOffice categories. Any template category created is added to the template category list in the **Templates** dialog.

Renaming template folders

It is recommended to **ONLY** rename template folders (categories) that you have created. Renaming LibreOffice template folders could cause problems with the other LibreOffice modules.

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the **Filter** drop down lists, select *Drawing* as the application and the category you want to rename.
- 3) Click on the **Settings** icon and select **Rename Category** from the context menu.
- 4) Enter a new name for the category in the name dialog that opens (Figure 16).
- 5) Click **OK** to save the renamed category as a category (folder) in LibreOffice and close the dialog.

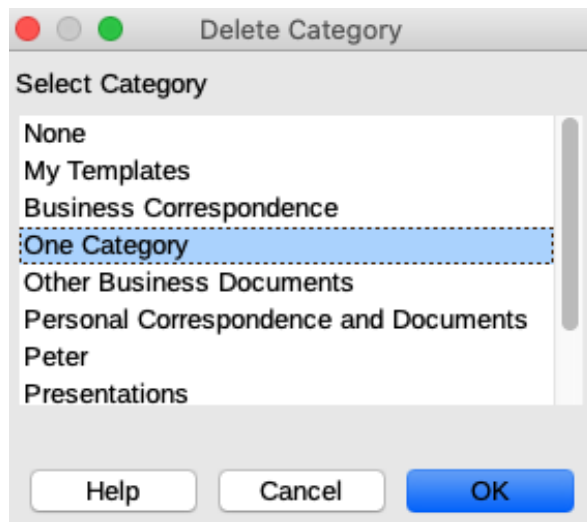


Figure 17: Delete Category dialog

Deleting template folders

You cannot delete the template folders supplied with LibreOffice or installed using the Extension Manager. You can only delete folders that you have created.

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the **Filter** drop down lists, select *Drawing* as the application and the category you want to delete.
- 3) Click on the **Settings** icon and select **Delete Category** from the context menu.
- 4) Select the category in the **Delete Category** dialog that opens (Figure 17).
- 5) Click **OK** to delete the category and close the dialog.
- 6) Click **Yes** to confirm the deletion of the folder.

Moving templates

To move a template from one template folder to another template folder:

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the **Filter** drop down lists, select *Drawing* as the application and the category where the template is located.
- 3) Click on the **Move** icon and the **Select Category** dialog (Figure 18) opens.
- 4) Select a category from **Select from Existing Category** or enter a name for a new category in **Create a New Category**.
- 5) Click **OK** to move the template and close the dialog.

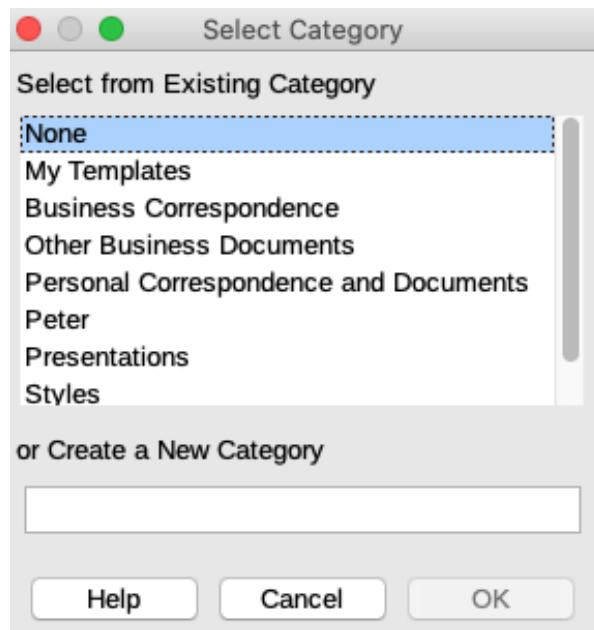


Figure 18: Moving templates dialog

Deleting templates

You cannot delete the templates supplied with LibreOffice or installed using the Extension Manager from inside LibreOffice. You can only delete templates that you have created or imported. Although system administrators can remove or add templates manually in the LibreOffice installation folder.

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the **Filter** drop down lists, select *Drawing* as the application and the category where the template is located.
- 3) Right click on the template you want to delete and select **Delete** from the context menu.
- 4) Click **Yes** to confirm the deletion of the template and close the dialog.
- 5) Click **Cancel** to close the **Templates** dialog.

Importing templates

If the template that you want to use is in a different location, you must import it into a LibreOffice template folder.

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) Click the **Import** icon and the **Select Category** dialog (Figure 18) opens.
- 3) Select a category from **Select from Existing Category** or enter a name for a new category in **Create a New Category** for the imported template.
- 4) Click **OK** and a standard file browser dialog opens.

- 5) Navigate to the folder containing the template you want to import, select it and click **Open**. The file browser closes and the template appears in the selected category.
- 6) Alternatively, click on the **Browse online templates** icon to open your browser at the LibreOffice template page and download the template you want to a folder on your computer.
- 7) Repeat Steps 1 thru 5 above to import the downloaded template into LibreOffice.



Note

The **Extension Manager** provides an easy way to import and install template collections that have been packaged as extensions. For more information about the **Extension Manager**, see the *Getting Started Guide*.

Exporting templates

- 1) Use one of the following methods to open the **Templates** dialog (Figure 13 on page 14):
 - Go to **File > New > Templates** on the main menu bar.
 - Go to **File > Templates > Manage Templates** on the main menu bar.
 - Use the keyboard short cut **Shift+Ctrl+N**.
- 2) In the **Filter** drop down lists, select *Drawing* as the application and the *Category* where the template is located.
- 3) Select the template you want to export and click the **Export** icon to open a file browser window.
- 4) Navigate to the folder where you want to export the template to, select it and click **Select**. The file browser closes and the template appears in the selected folder.
- 5) Click **OK** to close the information dialog.

Multiple layers

Layers in LibreOffice Draw allow you to assemble elements on a drawing page that are related. Think of layers as individual workspaces that you can hide from view, hide from printing, or lock.

Layers do not determine the stacking order of objects on your drawing page, except for the **Controls** layer which is always in front of all other layers. The stacking order of objects on your drawing page is determined by the sequence in which you add the objects. You can rearrange the stacking order by going to **Shape > Arrange** on the main menu bar.

Layers in a drawing are indicated by tabs located above the **Status** bar. Click on a tab to select a layer. Figure 19 shows the **Layout** layer has been selected.

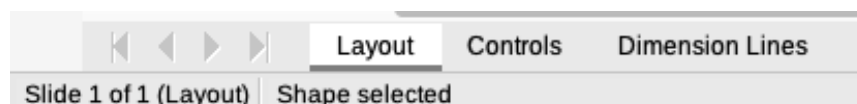


Figure 19: Layer tabs



Note

You can lock a layer to protect its contents, or hide a layer and its contents from view or from printing. When you add a new layer, the layer is added to all of the pages in your drawing. However, when you add an object to a layer, it is only added to the current drawing page.

If you want the object to appear on all of the pages (for example, a company logo), add the object to the master page by going to **View > Master** on the main menu bar. To return to your drawing, go to **View > Normal** on the main menu bar.

Default layers

In **Normal** view, LibreOffice Draw provides three default layers that are visible to the user and these default layers cannot be deleted or renamed.

- **Layout** – is the default workspace where objects are normally placed.
- **Controls** – used for form controls that have been assigned an action. Objects on this layer are always in front of objects on other layers. Normally, form controls are not printed and the *Printable* setting has to be set deselected.
- **Dimension Lines** – is where the dimension lines are drawn. By switching the layer to show or hide, you can easily switch dimension lines on and off.

In **Master** view, the layer **Background objects** is where you can place objects that you want to appear on every page in your drawing, for example date, page number, drawing title and so on.

Inserting layers

- 1) Right-click the layer tab area at the bottom left of the Workspace area and select **Insert Layer** from the context menu, or go to **Insert > Layer** on the main menu bar to open the **Insert Layer** dialog (Figure 20) or click right from existing layers on the tab area.
- 2) Type a meaningful name for the layer in the **Name** and **Title** text boxes. If necessary, type a description for the layer in the **Description** text box.

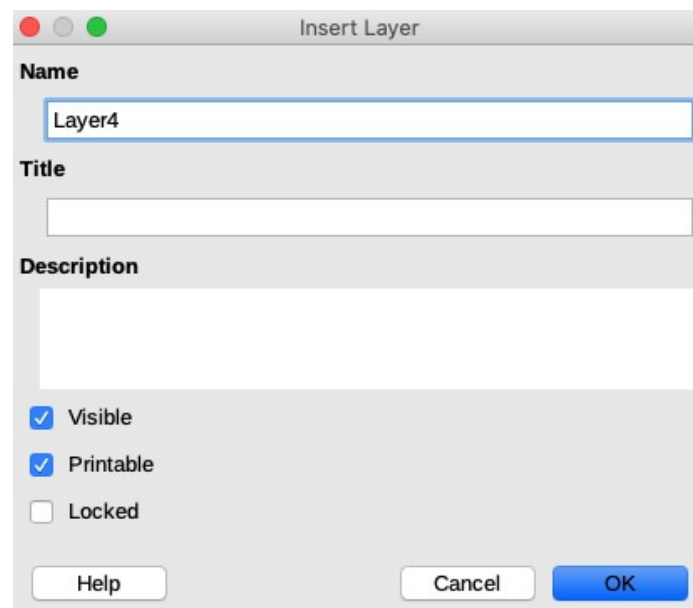


Figure 20: Insert Layer dialog

- 3) Select **Visible** if you want the layer to be visible in your drawing. When **Visible** is not selected, the layer is hidden and its name in the layer tab changes color to blue.
- 4) Select **Printable** if you want the layer to print when you print your drawing. Not printing is useful if you want use a draft layer for guides or annotations that you use in making the drawing, but do not want to appear in the final output. The name of a layer is underlined in the layer tab bar when the **Printable** option is turned off.
- 5) Select **Locked** to prevent any objects on this layer from deletion, editing, or moving. No additional objects can be added to a locked layer. Locking a layer is useful, for example, when a base plan is to be protected while adding a new layer with other details. The name of a locked layer is written in italic in the layer tab bar.
- 6) Click **OK** to close the dialog and the new layer automatically becomes active.

Modifying layers

- 1) Right-click on the name tab of the layer and select **Modify Layer** from the context menu or double-click on the layer tab or use **Format > Layer...** on the main menu bar to open the **Modify Layer** dialog. This dialog is similar to the **Insert Layer** dialog in Figure 20.
- 2) Make your changes to the layer, then click **OK** to save the changes and close the dialog.

Working with layers

Selecting a layer

To select a layer, click on the name tab for the layer at the bottom of the drawing workspace. When a layer is selected, objects added to your drawing will only be added to that layer. Form controls are automatically added to the **Controls** layer and dimension lines added to the **Dimension Lines** layer.

If there are several layers in your drawing, a layer tab may not be visible on the layer tab bar. Use the navigation icons on the left of the layer tab bar to navigate to the layer you want to use or modify.

Hiding layers

- 1) Right-click on the name tab of the layer and select **Modify Layer** from the context menu or double-click on the name tab to open the **Modify Layer** dialog.
- 2) Clear the **Visible** check box and click **OK**. The text on the layer name tab changes color to blue. Any objects placed on a hidden layer will no longer be visible on the other layers in your drawing.
- 3) Alternatively, hold down the **Shift** key and click on the name tab to hide the layer.

Showing hidden layers

- 1) Right-click on the name tab of the layer and select **Modify Layer** from the context menu or double-click on the name tab to open the **Modify Layer** dialog.
- 2) Check the **Visible** check box and click **OK**. The text for the layer name tab changes to the default color for text for your computer setup. Any objects placed on a hidden layer will now become visible on the other layers in your drawing.
- 3) Alternatively, hold down the **Shift** key and click on the name tab to make the layer visible.

Locking layers

- 1) Right-click on the name tab of the layer and select **Modify Layer** from the context menu or double-click on the name tab to open the **Modify Layer** dialog.

- 2) Check the **Locked** check box and click **OK**. The text on the layer name tab is underlined. Locking a layer prevents any modification of the layer.
- 3) Alternatively, hold down the **Ctrl** key and click on the name tab to lock the layer.

Unlocking layers

- 1) Right-click on the name tab of the layer and select **Modify Layer** from the context menu or double-click on the name tab to open the **Modify Layer** dialog.
- 2) Uncheck the **Locked** check box and click **OK** to allow modification of the layer. The text on the layer name tab is no longer underlined.
- 3) Alternatively, hold down the **Ctrl** key and click on the name tab to unlock the layer.

Renaming layers

- 1) Right-click on the name tab of the layer and select **Rename Layer** from the context menu.
- 2) Type a new name for the layer and click outside the tab area to save the change.
- 3) Alternatively, follow the procedure in “*Modifying layers*” on page 23 to rename the layer.
- 4) Alternatively, hold down the **Alt** key and click on the name tab. The name becomes editable and is already selected. Enter the new name and press **Enter** key.

Deleting layers

- 1) Right-click on the name tab of the layer and select **Delete Layer** from the context menu.
- 2) Confirm the deletion and the layer and all its objects are deleted.

Moving objects layer to layer

If an object, or a group of objects, is selected, the layer where the object has been placed is shown at the left end of the **Status Bar**. Move an object, or a group of objects, from one layer to another layer using one of the following methods:

- Click and hold on the object until the cursor changes shape. While holding down mouse button, drag the cursor to the tab of the destination layer and release the mouse button. The position of the object will not change, but its new layer is displayed in the **Status Bar**.
- Go to **Edit > Cut** on the main menu bar or right click on the object and select **Cut** from the context menu. Click on the tab of the destination layer to make it the active layer. Then go to **Edit > Paste** on the main menu bar or right click on the Workspace and select **Paste** from the context menu. The position of the object will not change, but its new layer is displayed in the **Status Bar**.



Note

You can only rename or delete layers that you have added to a drawing. The default layers **Layout**, **Controls**, **Dimension Lines** and **Background objects**, cannot be renamed or deleted.

Dimensioning

Draw allows you to dimension objects and display these dimensions to make your drawing look more like an engineering drawing. When you create dimensions, they are automatically placed on the **Dimension Lines** layer (see “*Default layers*” on page 22 for more information).

Configuring dimensioning

Two ways are available to access the options to configure dimensioning. Both methods use a similar dialog where you can change the length, measurement, and guide properties of a dimension line.

Drawing object styles

- 1) Use one of the following methods to access your drawing styles to open the **Graphics Styles** dialog (Figure 21):
 - Go to **Format > Styles > Edit Styles** on the main menu bar.
 - Click on the **Styles and Formatting** icon on the **Line and Filling** toolbar to open the **Styles** deck on the Sidebar, then right click on a style and select **Modify** from the context menu.
 - Press the **F11** key on your keyboard to open the **Styles** deck on the Sidebar, then right click on a style and select **Modify** from the context menu.
 - Click on the **Styles** icon on the Sidebar to open **Styles** deck, then right click on a style and select **Modify** from the context menu.
- 2) Click on the **Dimensioning** tab to open the **Dimensioning** page in the dialog.
- 3) Make the changes you want for dimensioning using the various options in **Line** and **Legend** sections on the **Dimensioning** page.
- 4) Click **OK** to save your changes and close the dialog.
- 5) To reset the dimensioning options to the default properties of the template, open the **Graphics Style** dialog as given in Steps 1 and 2 above, then click on **Standard**.

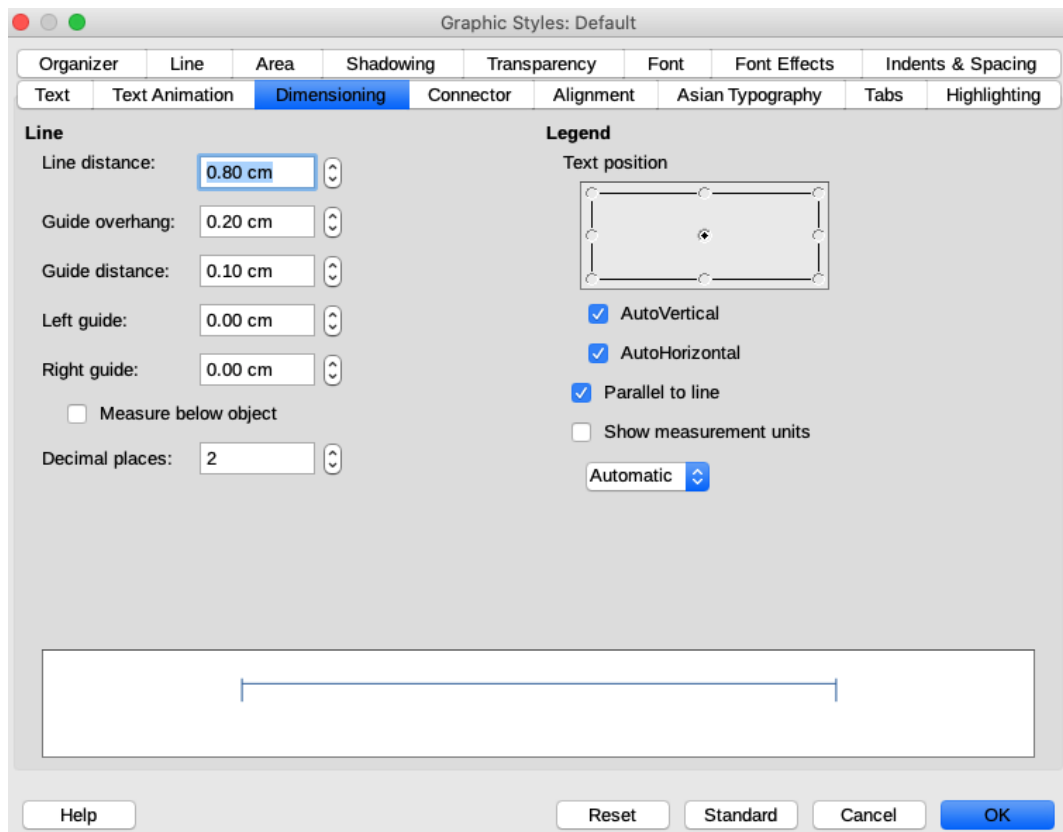


Figure 21: Graphic Styles dialog - Dimensioning page

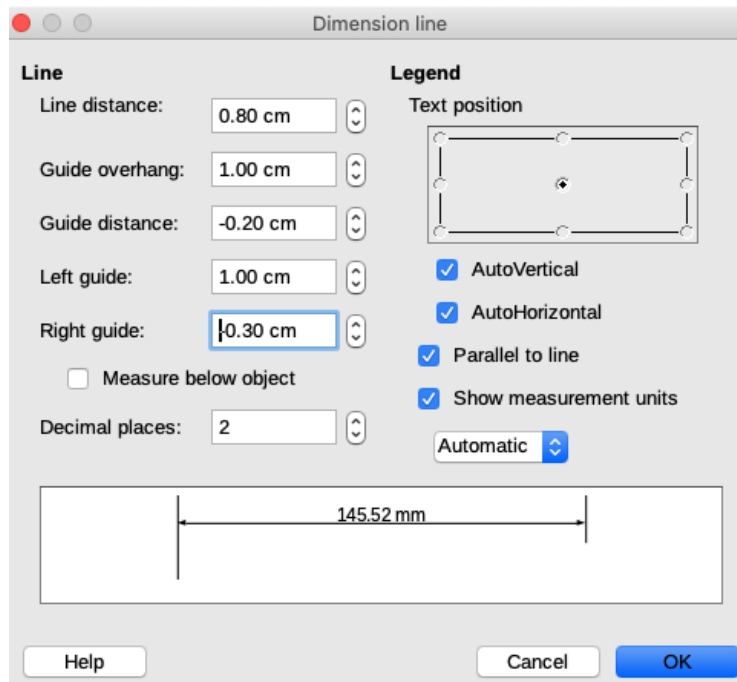


Figure 22: Dimension Line dialog

Dimension line dialog

- 1) Draw a dimension line. See “*Dimensioning objects*” on page 28 for more information.
- 2) Right-click on the dimension line and select **Dimensions** from the context menu to open the **Dimension line** dialog (Figure 22).
- 3) Make the changes you want to use for dimensioning using the various options in this dialog. These options are also available on the **Dimensions** page in the **Graphics Styles** dialog (Figure 21):
- 4) Click **OK** to save your changes and close the dialog.

Dimensioning options

With reference to the **Dimensions** page in the **Graphics Style** dialog (Figure 21) and the **Dimension Line** dialog (Figure 22), the dimensioning options are as follows. The preview in the dialog will change as you change the following options showing how the dimension line will appear in your drawing. An example dimension line is shown in Figure .

- **Line** – sets the distances between the dimension line and guides with respect to each other, dimension baseline and object. The baseline is not visible in a drawing, but is indicated by baseline points on each of the guides.
 - *Line distance* – specifies the distance between the dimension line and the object or the baseline. A minimum of -10mm to a maximum of 10mm can be entered in the text box. Lower the value, the closer the dimension line is to the object or baseline.
 - *Guide overhang* – is the distance the guide either extends above the dimension line or is below the dimension line. A minimum of -10mm to a maximum of 10mm can be entered in the text box. Using a positive value and the guide overhang extends above the dimension line. Using a negative value and the guide overhang is below the baseline.

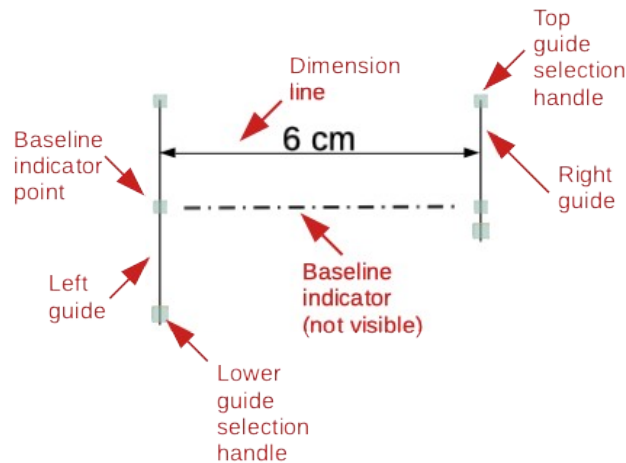


Figure 23: Example dimension line

- *Guide distance* – specifies the length of the right and left guides below the dimension line toward the object. A minimum of -10mm to a maximum of 10mm can be entered in the text box. Positive values extend the guides above the baseline and further away from the object. Negative values extend the guides below the below and closer to the object.
- *Left guide* – specifies the length of the left guide starting at the dimension line. A minimum of -10mm to a maximum of 10mm can be entered in the text box. Positive values extend the guide below the dimension line toward the object. Negative values move the guide away from the object.
- *Right guide* – specifies the length of the right guide starting at the dimension line. A minimum of -10mm to a maximum of 10mm can be entered in the text box. Positive values extend the guide below the dimension line toward the object. Negative values move the guide away from the object.
- *Measure below object* – reverses the positions and lengths of the dimension line and guides set in **Line** options.
- *Decimal places* – specifies the number of decimal places used for the display of line properties.
- **Legend** – sets the properties of the dimension text.
 - *Text position* – determines the position of the dimension text with respect to the dimension line and the guides. The *AutoVertical* and *AutoHorizontal* checkboxes must be cleared before you can assign a text position.
 - *AutoVertical* – determines the optimal vertical position for the dimension text.
 - *AutoHorizontal* – determines the optimal horizontal position for the dimension text.
 - *Parallel to line* – displays, when selected, the text parallel to the dimension line or, when deselected, at 90 degrees to the dimension line.
 - *Show measurement units* – shows or hides the dimension measurement units. You can also select a measurement unit you want to display from the drop down list.



Note

The dimensioning options are always linked and stored with the current work page. All the changes that you make apply only to this document. New documents are started with the standard properties of Draw. If you want to use the dimensioning options for future drawings, save your drawing as a template.

Guide selection handles

The guide selection handles at the top and bottom of the guides are used to extend the guides more than the limits of -10mm to 10mm in the **Dimensions** page in the **Graphics Style** dialog (Figure 21) and the **Dimension Line** dialog (Figure 22).

With reference to the dimension example in Figure 23, the guide selection handles are used as follows:

- **Top guide selection handles** – select either selection handle and drag the handle to increase or decrease the guide overhang of both guides.
- **Lower left guide selection handle** – select the left guide selection and drag the handle to increase or decrease of the left guide distance.
- **Lower right guide selection handle** – select the right guide selection and drag the handle to increase or decrease of the right guide distance.



Tip

When dimensioning objects, it is recommended to use the zoom function, guide lines and snap functions so that you can accurately place dimension lines on an object. See *Chapter 3 Working with Objects and Object Points* for more information.

Dimensioning objects

- 1) Click on the small triangle next to the **Lines and Arrows** icon on the **Drawing** toolbar to open the **Lines and Arrows** pop-up toolbar (Figure 24).



Note

This icon changes depending on the last tool used for **Lines and Arrows**. Also, this toolbar can become a floating toolbar by clicking at the top of the pop-up toolbar and dragging it into the Workspace.

- 2) Click on the **Dimension Line** icon and the cursor normally changes to a cross. This depends on your computer setup.



Figure 24: Lines and Arrows toolbar



Figure 25: Dimensioning objects

- 3) Position the cursor at one corner of the object, then click and drag the cursor to the other corner of the object to draw the dimension line. To restrict drawing the dimension line in the horizontal or vertical direction, press and hold the **Shift** key while dragging the cursor.
- 4) Release the mouse button when you reach the other corner of the object and the dimension line is drawn with the dimension automatically added (as shown in Figure 25). The dimension line is also placed automatically on the Dimension Lines layer. See “*Default layers*” on page 22 for more information.
- 5) To edit the text of the dimension, double-click on an unselected dimension line to enter text edit mode and make your changes. Click outside the dimension line to save the changes.
- 6) To configure the dimension line. See “*Configuring dimensioning*” on page 25 for more information.



Note

After editing the dimension text, entering your own text and then deleting your text, you have to save your drawing and reopen it to enable automatic measurements for dimensioning.



Note

If drawing to scale, the dimension configuration values in the **Dimensions** page in the **Graphics Style** dialog and the **Dimension Line** dialog will also be to scale. For example, a value of 10mm in the dialog will result in a dimension value of 300mm if the scale has been set to 1:30.

Drawing to scale

In Draw a drawing is made on a predefined drawing area. This is normally Letter or A4 page size depending on your locale, computer setup, and the default printer connected to your computer. However, depending on the actual size of the drawn objects, it is often convenient to reduce or enlarge the drawing by scaling (for example 1:10 or 2:1).

You can specify a scale value by going to **Tools > Options > LibreOffice Draw > General** (Figure 26) and selecting a value from the *Drawing scale* drop-down list. The default setting for this option is 1:1. When you make a change to the drawing scale, it is reflected in the rulers at the top and left side of your drawing.

Any change in the drawing scale has no effect on the basic drawing operations. Draw automatically calculates the necessary values (for example, dimension lines). The spacing of the grid points is independent of drawing scale as the grid is an optical drawing aid and not a drawing element.

An increase in scale (for example 1:4) allows you to draw objects that would not fit into the paper size for your drawing. A decrease in drawing scale (for example 4:1) allows you to draw small objects accurately at an increased size to make them easier to understand. An example of drawing to scale is shown in Figure 27. All three rectangles are the same size.

- The left rectangle was drawn at the default 1:1 scale and dimensioned.
- The drawing scale was then changed to 1:4 and the dimensions were automatically increased by Draw to reflect the decrease in scale for the center rectangle.
- The drawing scale was then changed to 4:1 and the dimensions were automatically decreased by Draw to reflect the increase in scale for the right rectangle.

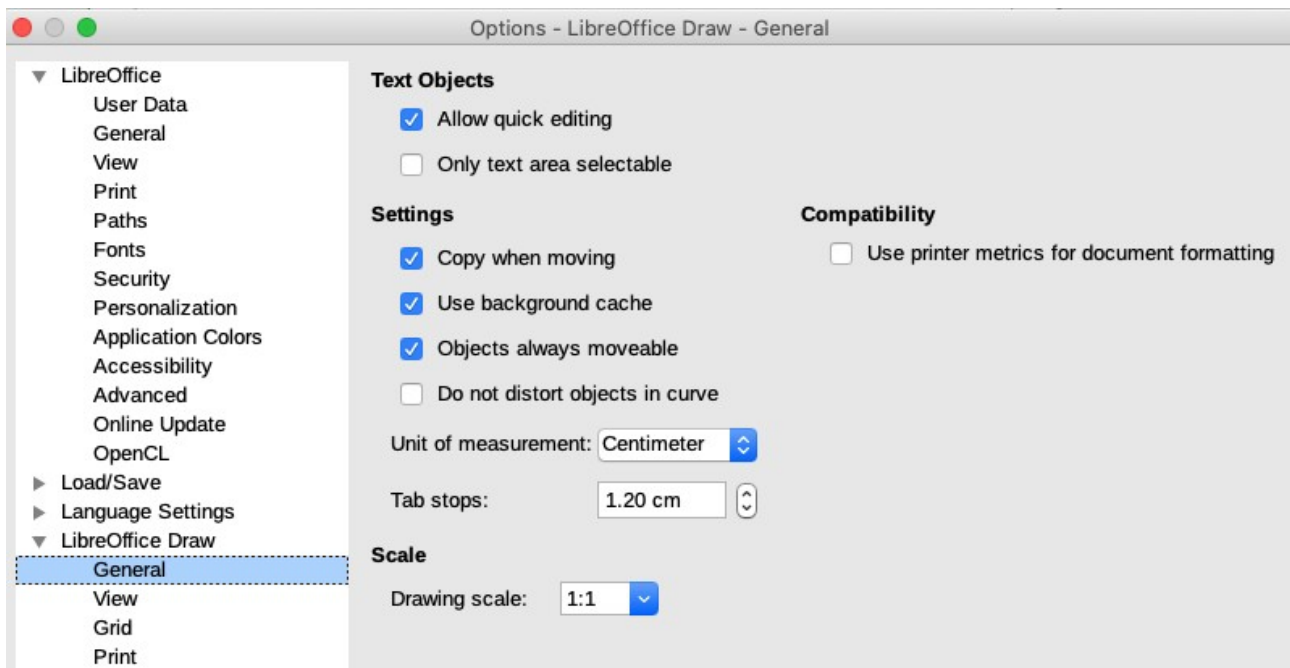


Figure 26: LibreOffice Draw dialog - General page

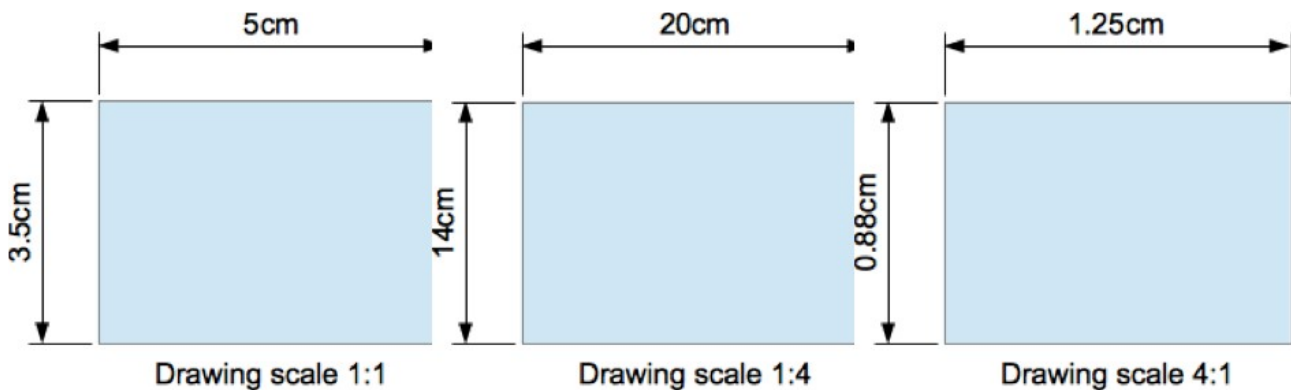


Figure 27: Examples of drawing to scale

Views

You can use several views of the same document. They can use different settings for visible, printable and locked for layers, different zoom factors, different origins, or even use master page and normal page at the same time. The document format can only contain one view. So make sure that the view you want to save is active when saving.

To get a new view, go to **Window > New Window** on the main menu bar to open a new window. Arrange the windows according to your operating system. The windows act on the same document. A change to the document in one window is immediately reflected in the other window.

Gallery

Draw includes several images in the **Gallery**. These images are grouped into themes (for example Arrows, Bullets, Computers, Diagrams, Environment and so on). The **Gallery** deck on the Sidebar (Figure 28) lists the available themes. Click on a theme and its images are displayed below the theme list.

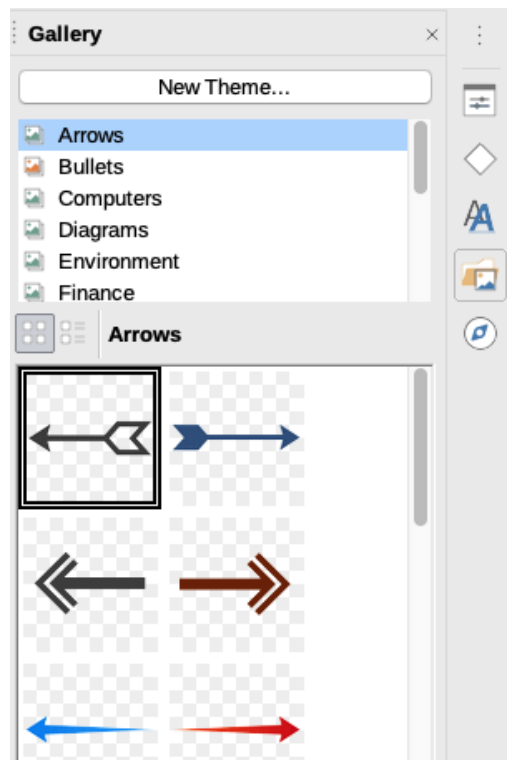


Figure 28: Gallery deck in Sidebar

You can create themes and add your images into the new theme to the **Gallery**. For more information on creating themes and adding images, see “*Creating themes and adding images*” on page 32.

You can also delete images and themes from the **Gallery**. For more information on deleting themes and images, see “*Deleting gallery themes and images*” on page 33.



Note

It is recommended NOT to delete themes or images that are part of the default installation of LibreOffice. Deletion could cause problems in other LibreOffice modules where the default **Gallery** themes and images have been used.

Using the Gallery

- 1) Use one of the following methods to open the **Gallery** deck on the Sidebar (Figure 28):
 - Click on the **Gallery** icon on the Sidebar.
 - Go to **Insert > Media > Gallery** on the main menu bar.
 - Click on the **Open Clip Art and Media Gallery** on the **Standard** toolbar.
- 2) Select a theme at the top of the **Gallery** deck.
- 3) Use one of the following methods to place an image into your drawing:
 - Click on an image in the **Gallery** deck and drag the image into your drawing.
 - Right-click on an image and select **Insert** from the context menu and the image is placed at the centre of your drawing.
 - Right-click on an image and select **Copy** from the context menu and then paste the image into your drawing. The image is placed at the center of your drawing.

- 4) Edit the gallery image to your preferences. For more information on editing pictures, see *Chapter 6 Editing Pictures*.

Creating themes and adding images

- 1) Use one of the following methods to open the **Gallery** deck on the Sidebar (Figure 28):
 - Click on the **Gallery** icon on the Sidebar.
 - Go to **Insert > Media > Gallery** on the main menu bar.
- 2) Click on **New Theme** at the top of the **Gallery** deck to open the **Properties of New Theme** dialog (Figure 29).
- 3) Type a memorable name for your theme in the text box.
- 4) Click **OK** to save the new theme and close the dialog.
- 5) Right-click on the new theme name that you have created and select **Properties** from the context menu to open the **Properties of New Theme** dialog (Figure 29).
- 6) Click on the Files tab to open the Files page of the **Properties of New Theme** dialog (Figure 30).
- 7) Click on **Find Files** to open the **Select Path** dialog (Figure 31).
- 8) Browse to the folder that contains the images you want to use.

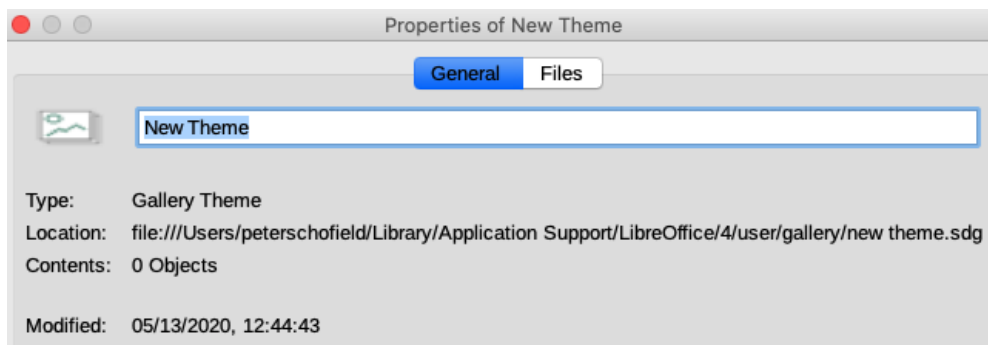


Figure 29: Properties of New Theme dialog – General page

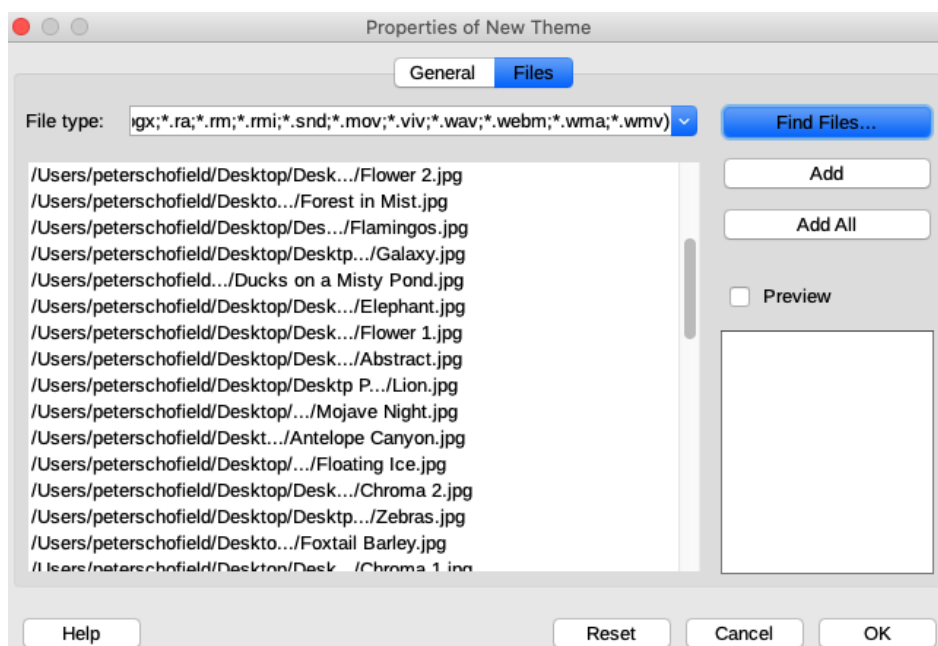


Figure 30: Properties of New Theme dialog - Files page

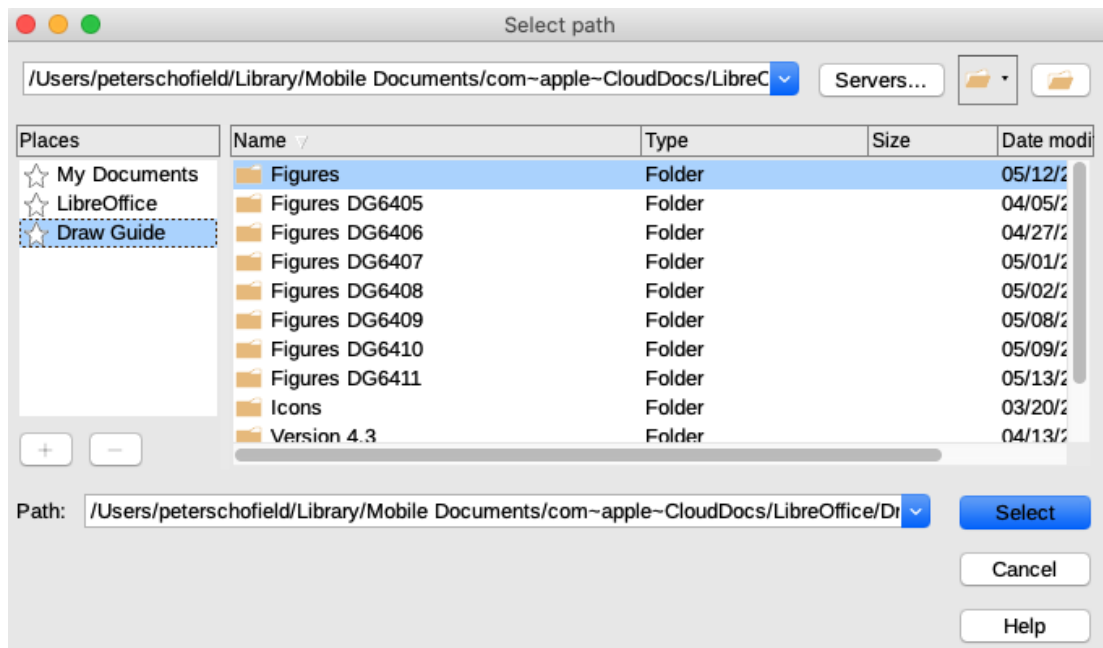


Figure 31: Select Path dialog for gallery theme images

- 9) Click **Select** to select the files contained in the folder and the **Select Path** dialog closes. The list of files contained in the folder now appear in the **Properties of New Theme** dialog.
- 10) Select the files you want to use in for your new theme and click **Add**. The added files will disappear from the file list and the images will appear in the **Gallery**.
- 11) If you want to add all the files in the list, click **Add All**. All the files will disappear from the list and the images will appear in the **Gallery**.
- 12) Click **OK** when finished and close the **Properties of New Theme** dialog.

Deleting gallery themes and images

- 1) Right-click on a theme or image in the **Gallery**.
- 2) Select **Delete** from the context menu.
- 3) A confirmation message appears. Click **Yes** and the image or theme.



Note

The image is a linked file and only the link is deleted from the **Gallery**. The original image file is not deleted.

Updating the Gallery

All the images in the **Gallery** are linked files. Occasionally, it is beneficial to update a theme you have created to make sure that all the files are still there. To do so, right-click on a theme you have created and you have added at least one file and then select **Update** from the context menu.

Renaming themes

To rename a theme you have created, right-click on the theme name and select **Rename** from the context menu.



Note

It is recommended NOT to rename themes or images that are part of the default installation of LibreOffice. Renaming could cause problems in other LibreOffice modules where the default **Gallery** themes and images have been used.

Using drawing objects with Gallery

As well as adding images to the Gallery, you can also drawing objects as follows:

- 1) Select the theme where you want to add a drawing object or create a new theme.
- 2) Click on a drawing object you have created and drag the object to the selected theme and release mouse button. These objects are stored in a folder in your user directory.

After being added to the Gallery, the drawing object loses its connection to graphic styles and all properties are set as direct formatting. The drawing object can be in new Draw documents and also used in the other LibreOffice modules in the same way as any other object from the Gallery.

Adding complete themes

There are two ways to add a complete theme to the Gallery:

- If there is a folder with themes, you can add a path to that folder in **Tools > Options > LibreOffice > Paths > Gallery**. Click on **Edit...** and select the folder that contains the themes. Disadvantage of this method is you might get themes already installed. You cannot delete a single theme from that folder in your Gallery, but you have to remove the total set of themes by removing the path to the folder.
- Gallery themes can be installed as extensions. Search for themes at <https://extensions.libreoffice.org/extensions>.

Colors

Draw (like all LibreOffice components) uses color palettes for the representation of colors. You can create colors and color palettes to suit your own needs by modifying colors in a palette, adding other colors, or creating custom color palettes.



Note

LibreOffice uses the **RGB (Red, Green, Blue)** color model internally for printing in all of its software modules. The **CMYK (Cyan, Magenta, Yellow, Key (Black))** controls are provided only to ease the input of color values using CMYK notation.

- **RGB** model – stands for Red, Green, Blue. It is based on the additive color model of light waves and is designed for electronic displays and computers.. This means, the more color you add, the closer you get towards white. RGB is created using scales from 0 to 255. So, black would be R=0, G=0, and B=0. White would be R=255, G=255, and B=255.
- **CMYK** model – stands for Cyan, Magenta, Yellow, Key (Black). It is a subtractive color model where you have to subtract colors to get to white. It is mainly used in printing which is why the ink cartridges for your printer are labeled CMYK. CMYK works on a scale of 0 to 100. If C=100, M=100, Y=100, and K=100, you end up with a black color. But, if all four colors equal 0, you end up with true white.

- **HSB** values – stands for hue, saturation, brightness. HSB values are an alternative representation of the RGB color model and was designed to be more closely align with the way human vision perceives color-making attributes. You can use HSB values to fine tune any custom colors that you create.



Tip

More information on color models and color values can be found at http://en.wikipedia.org/wiki/Color_model.

Changing colors

Changing colors in objects you use color palettes to select colors. These color palettes are installed with LibreOffice and are used in all the LibreOffice modules. Using these color palettes is similar across all types of objects, but accessing the color palettes does vary according to the type of object selected.

Color Bar

Although LibreOffice includes tools that allow you to precisely specify a color, LibreOffice also includes a **Color Bar** that allows you to quickly change the color of an object in your drawing. By default, the colors available in the **Color Bar** are from the **Standard** palette.



Note

If you have changed the color palette in the **Area** or **Line** dialogs, the color palette used by the **Color Bar** also changes to the selected color palette.

- 1) Select the object in your drawing where you want to quickly change the color.
- 2) Go to **View > Color Bar** on the main menu bar to open the **Color Bar** (Figure 32).
- 3) Left-click on a color to change the area fill color or right-click on a color to change the line color of a selected object.
- 4) To remove a color from an object with a fill color, click on the **X** box in the bottom left corner of the **Color Bar**.
- 5) To close the **Color Bar**, go to **View > Color Bar** on the main menu bar and deselect **Color Bar**.

Area fill colors

Use the **Area** dialog as follows:

- 1) Select an object that has an area fill color, for example a colored square or triangle.
- 2) Open the **Area** dialog (Figure 33) using one of the following methods:
 - Go to **Format > Area** on the main menu bar.
 - Right click on the object and select **Area** from the context menu.
 - Click on the **Area** icon on the **Line and Filling** toolbar.
- 3) Click on the **Color** button to open the **Color** page.
- 4) Select the color palette to use from the drop down list in *Colors > Palette*.

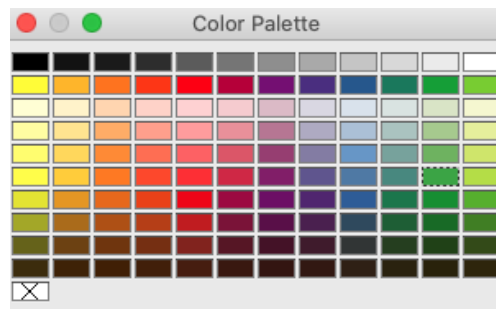


Figure 32: Color Bar dialog

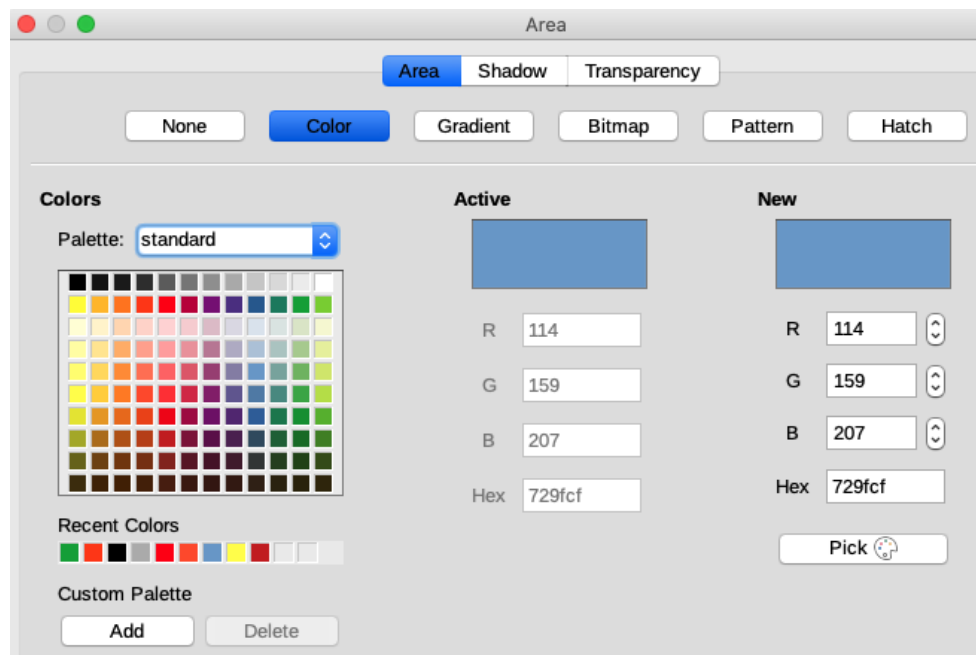


Figure 33: Area dialog - Color page

- 5) Click on a color from the ones displayed, or select a color that has been previously used from *Recent Colors*.
- 6) Click **OK** to save your changes and close the dialog. The selected fill color will appear in the selected object.

Use the **Area** section in the **Properties** deck on the Sidebar (Figure 34) as follows:

- 1) Select an object that has an area fill color, for example a colored square or triangle.
- 2) Make sure the **Area** section in the **Properties** deck on the Sidebar is expanded.
- 3) In the *Fill* drop down list, make sure *Color* is selected.
- 4) Click on the small triangle to the right of *Select the color to apply* to open the *Fill Color* palette.
- 5) Select the color palette to use from the drop down list in the *Fill Color* palette.
- 6) Click on a color from the colors displayed, or select a color that has been previously used from *Recent Colors*.
- 7) The *Fill Color* palette will close and the selected fill color will be applied to the object.

Use the *Fill Color* palette available on the **Line and Filling** or **Drawing** toolbar as follows:

- 1) Select an object that has an area fill color, for example a colored square or triangle.
- 2) Click on the small triangle to the right of *Fill Color* on the **Line and Filling** or **Draw** toolbar to open the *Fill Color* palette.

- 3) Select the color palette to use from the drop down list in the *Fill Color* palette.
- 4) Click on a color from the colors displayed, or select a color that has been previously used from *Recent Colors*.
- 5) The *Fill Color* palette will close and the selected fill color will be applied to the object.

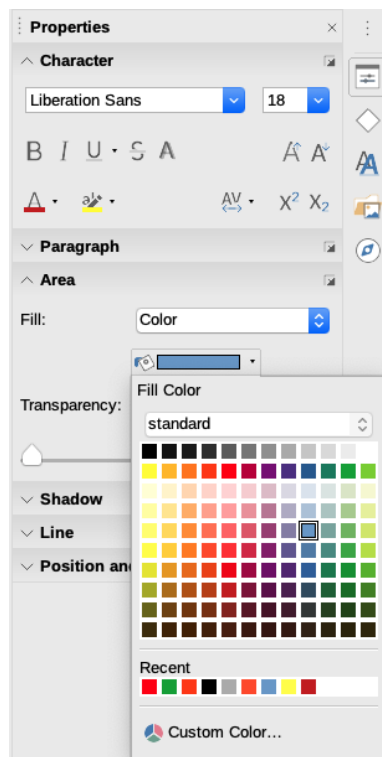


Figure 34: Properties deck on Sidebar - Area section

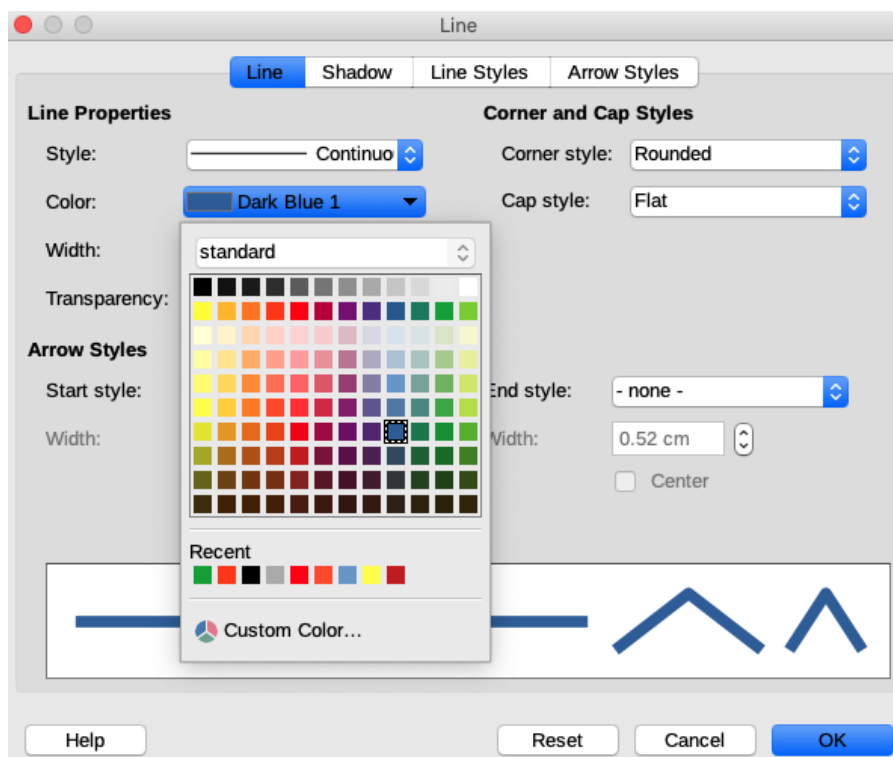


Figure 35: Line dialog - Color palette

Lines or border colors

The *Line Color* palettes for lines and borders are identical in appearance and use as the *Fill Color* palettes used for area fill colors.

Use the **Line** dialog (Figure 35) as follows:

- 1) Select a line or object in your drawing.
- 2) Open the **Line** dialog using one of the following methods:
 - Go to **Format > Line** on the main menu bar.
 - Right click on the line or object and select **Line** from the context menu.
 - Click the small triangle to the right of the **Color** drop down list.
- 3) Select the color palette to use from the drop down list in the *Line Color* palette
- 4) Click on a color from the ones displayed, or select a color that has been previously used from *Recent Colors*.
- 5) The *Line Color* palette will close and the selected color will be applied to the line or border.
- 6) Click **OK** to save your changes and close the dialog.

Use the **Line** section in the **Properties** deck on the Sidebar (Figure 36) as follows:

- 1) Select a line or object in your drawing.
- 2) Make sure the **Line** section in the **Properties** deck on the Sidebar is expanded.
- 3) Click on the small triangle to the right of *Select the color of the line* to open the *Line Color* palette.

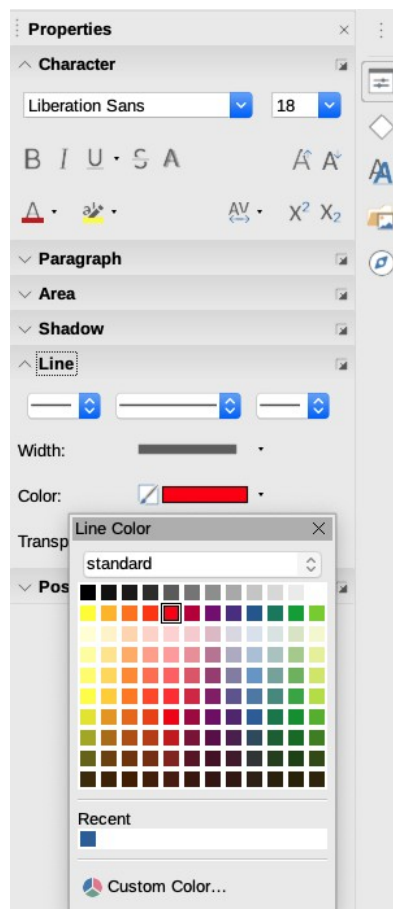


Figure 36: Properties deck on Sidebar - Line section

- 4) Alternatively, click on the small triangle to the right of the **Line Color** icon on the **Line and Filling** toolbar to open the *Line Color* palette.
- 5) Select the color palette to use from the drop down list in the *Line Color* palette.
- 6) Click on a color from the ones displayed, or select a color that has been previously used from *Recent Colors*.
- 7) The *Line Color* palette will close and the selected color will be applied to the line or border.

Use the *Line Color* palette available on the **Line and Filling** or **Drawing** toolbar as follows:

- 1) Select a line or object that in your drawing.
- 2) Click on the small triangle to the right of **Line Color** icon on the **Line and Filling** or **Drawing** toolbar to open the *Line Color* palette.
- 3) Select the color palette to use from the drop down list in the *Line Color* palette.
- 4) Click on a color from the colors displayed, or select a color that has been previously used from *Recent Colors*.
- 5) The *Line Color* palette will close and the selected color will be applied to the line or border.

Object text

The *Font Color* palette for text is accessed using the **Font Color** icon in the **Character** section in the **Properties** deck on the Sidebar (Figure 37), or the **Font Color** icon available on the **Text Formatting** toolbar.

The *Font Color* palette for text is identical in appearance and use as the *Fill Color* and *Line Color* palettes used for area fill, line and border colors.

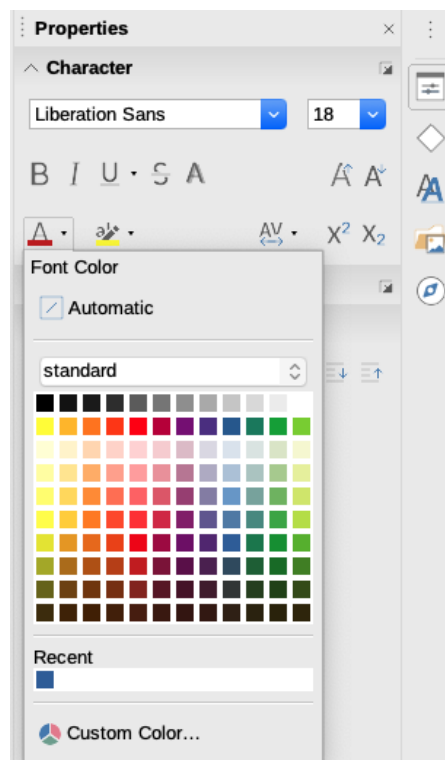


Figure 37: Properties deck on Sidebar - Character section



Note

The **Text Formatting** toolbar automatically replaces the **Line and Filling** toolbar when text is selected in your drawing. If the **Text Formatting** toolbar does not appear, go to **View > Toolbars** on the main menu bar and select **Text Formatting**.

- 1) Select text in a text box or text contained in an object in your drawing.
- 2) Click on the small triangle to the right of the **Font Color** icon in the **Character** section in the **Properties** deck on the Sidebar (Figure 37), or the **Font Color** icon available on the **Text Formatting** toolbar to open the *Font Color* palette.
- 3) Select the color palette to use from the drop down list in the *Font Color* palette.
- 4) Click on a color from the colors displayed, or select a color that has been previously used from *Recent Colors*.
- 5) The *Font Color* palette will close and the selected color will be applied to the text.

Creating colors

Any custom colors created are automatically placed in the **Custom** palette. The **Custom** palette is available across all modules of LibreOffice.



Note

LibreOffice uses only the RGB color model for printing in color. The RGB values of the selected color are displayed below the preview boxes.

To create a custom color using the **Area** dialog (Figure 33 on page 36) is as follows:

- 1) Go to **Format > Area** on the main bar to open the **Area** dialog.
- 2) Click on the **Color** button to open the **Color** page.

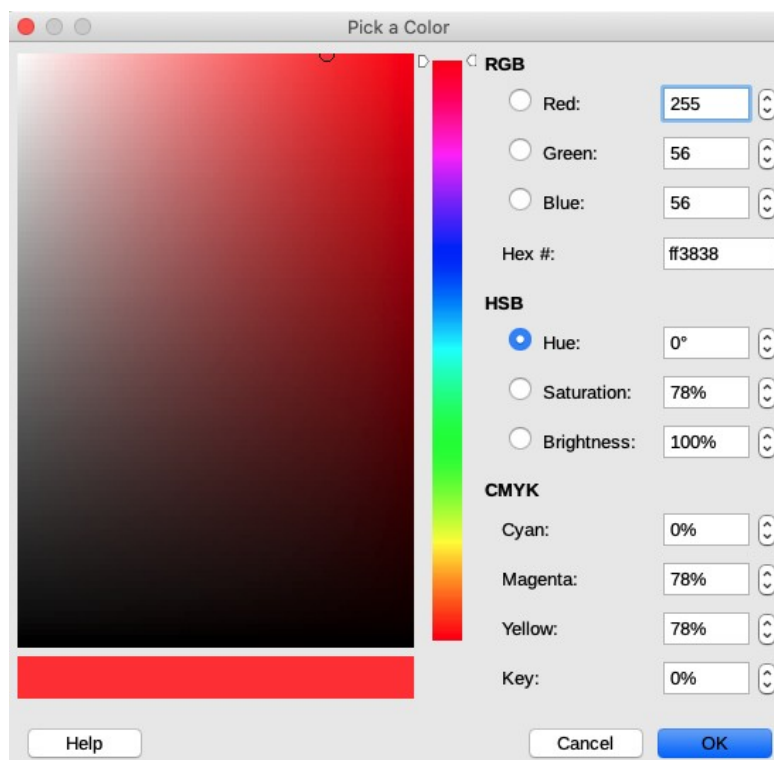


Figure 38: Pick a Color dialog

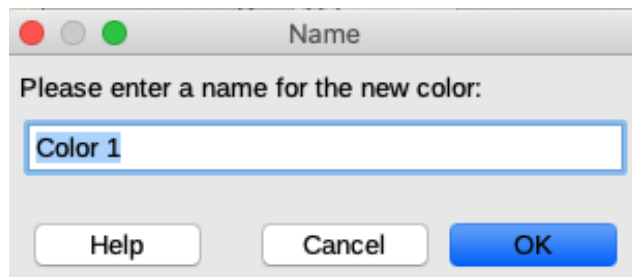


Figure 39: Name dialog

- 3) Select a predefined palette from the drop down list to open a color palette that contains a color similar to the one you want to create.
- 4) Select a color in the color palette that is similar to the one you want to create. The color appears in the **New** preview box.
- 5) If you know the RGB values of your custom color, enter these values in the RGB boxes under the **New** preview box. The color in the **New** preview box will change as you change the values.
- 6) If you do not know the RGB values, then create your custom color as follows:
 - a) Click on the **Pick** button to open the **Pick a Color** dialog (Figure 38).
 - b) Select the color range in the vertical bar, then click and drag the small target circle until you have a color that is close to the color your require. You will notice that the values for RGB, HSB and CMYK will change as you move the small target circle.
 - c) Alternatively and if you know the CMYK percentage values, enter these percentage values in the CMYK boxes. You will notice that the RGB values will also change to match the CMYK percentage values.
 - d) Click **OK** to close the **Pick a Color** dialog and your custom color appears in the **New** preview box on the **Area** dialog.
- 7) On the **Area** dialog, click **Add** in the *Custom Palette* option to open the **Name** dialog (Figure 39).
- 8) Enter a memorable name for your custom color in the text box in the **Name** dialog.
- 9) Click **OK** to save the name for your custom color and close the **Name** dialog. Your custom color will be added to the *custom* palette.



Note

When you select one of the RGB or HSB options, the main color display in the **Pick a Color** dialog (Figure 38) changes its color range to help you create a new color.



Note

It is important to use a memorable name for your custom color so that you can easily recognize it in the Custom palette. If you do not give the color a memorable name, the color will be given a hex number, which will make it difficult identifying colors when you have more than one custom color.

Deleting colors

Only colors that you have created and are available in the *custom* palette can be deleted as follows:

- 1) Go to **Format > Area** on the main menu bar to open the **Area** dialog (Figure 33 on page 36).
- 2) Click on the **Color** button to open the **Color** page.
- 3) Select the *custom* palette from the drop down list in **Colors > Palette**.
- 4) Select the color you want to delete.
- 5) In **Custom Palette**, click on **Delete** and the color is deleted without any confirmation.
- 6) Click **OK** to close the **Area** dialog.

Bézier curves

In LibreOffice you can use Bézier¹ curves in your drawing. A curve is defined by means of a start point, an end point, and, where necessary, control points. For points on the curve the terms nodes or anchors are often used. For more information and an explanation of the mathematical background of Bézier curves, see http://en.wikipedia.org/wiki/Bezier_curve.

Bézier curves are very useful for experimenting with the shape and form of curves. In point mode you can change the curve alignment by dragging the points with the mouse. In the example shown in Figure 40, the curve leaves the start point P₀ in the direction of the first control point P₁ and arrives at the end point P₃ from the direction of the second control point P₂. The more distant a control point is from the start or end point the smaller the curvature at that point. If a control point lies directly on one of these points, it has no influence on the curve.

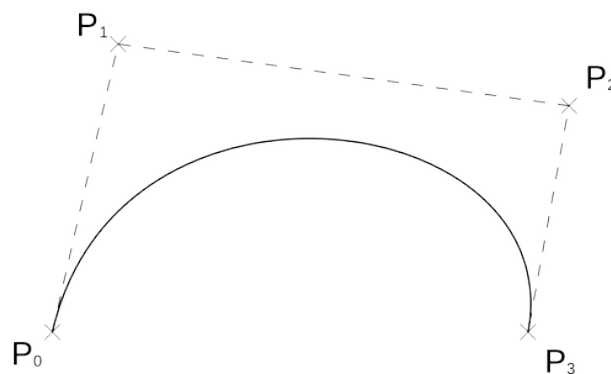


Figure 40: Example of a Bézier curve

Drawing Bézier curves

- 1) Click on the **Curve** icon in the **Curves and Polygons** section of the **Shapes** deck on the Sidebar or in the **Drawing** toolbar.
- 2) Click at the start point where you want to draw the curve and, keeping the mouse button pressed, drag the cursor to approximate the position of the end point for the curve.
- 3) Release the mouse button, then drag the end point of the curve to its end position.
- 4) Double-click when you have reached the end position of the curve and a curve is drawn. The arc of the curve is determined by the distance you have dragged to create the end point.
- 5) Click on the **Points** icon on the **Drawing** toolbar or press the **F8** key to open the **Edit Points** toolbar (Figure 41).

¹ Bézier curves were invented by Pierre Bézier, an engineer working with the Renault car manufacturer, who developed the technique in the 1960s. The technology was intended to make modeling the surface of vehicles easier.

- 6) Click once on the curve to display the start and end points. The start point of the curve is larger than the end point.
- 7) Move the cursor over the start or end point and drag the control point to change the curve shape. As you drag a start or end point, a control point appears at the end of a dashed line connected to the point you have selected, as shown in Figure 42.
- 8) When you have the position for your start or end point, release the cursor and the control point remains active.
- 9) Click on the control point and drag it to also change the shape of the curve.
- 10) When you have finished editing the curve, click anywhere on the workspace to deselect the curve and stop editing points.

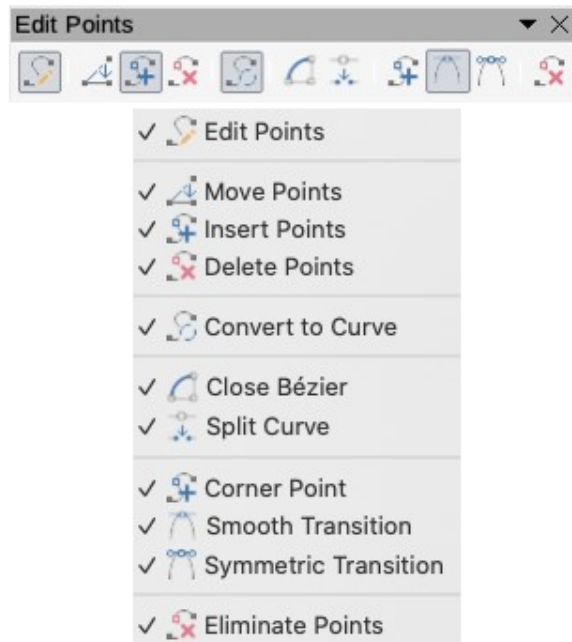


Figure 41: Edit Points toolbar

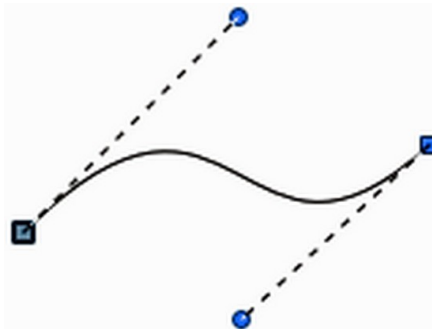


Figure 42: Control points on a curve

Edit Points tools

After the **Edit Points** toolbar has been opened, each time you select an object that has been converted to a curve or polygon, the toolbar will appear. Each time you deselect an object that has been converted, the toolbar will close. Available tools on the **Edit Points** toolbar will depend on the object selected and which object point has been selected.

With reference to Figure 41, the tools available on the **Edit Points** toolbar allow you to edit and change the shape of a Bézier curve and are explained as follows:

- **Points** – allows you to activate or deactivate the edit mode for Bézier objects. In the edit mode, individual points of the drawing object can be selected.
- **Move Points** – activates a mode in which you can move points. Click on a point and drag it to another location. The curve on both sides of the point follows the movement; the section of the curve between points changes shape. Point at the curve between two points or within a closed curve and drag the mouse to shift the entire curve without distorting the form.
- **Insert Points** – activates the insert mode and allows you to insert points. You can also move points, just as in the move mode. If, however, you click at the curve between two points and move the mouse a little while holding down the mouse button you insert a new point. The point is a smooth point, and the lines to the control points are parallel and remain so when moved. If you wish to create a corner point you must first insert either a smooth or a symmetrical point which is then converted to a corner point by using **Corner Point**.
- **Delete Points** – deletes one or several selected points. If you wish to select several points, click the appropriate points while holding down the **Shift** key. After selecting the points to be deleted, click this icon or press **Delete** key.
- **Convert To Curve** – converts a curve into a straight line or converts a straight line into a curve. If you select a single point, the curve segment after the point will be converted. If you convert the segment from straight to curve, the point itself and the other end point of the segment each gets a control point. If you convert from curve to straight these control points are removed. If you select more than two points, each time you click this icon, a different portion of the curve will be converted. If necessary, round points are converted into corner points. If a section of the curve is straight, the end points of the line have a maximum of one control point each.
- **Close Bézier** – closes or opens a poly line or a curve. A line is closed by connecting the last point with the first point. The first point is indicated by an enlarged square.
- **Split Curve** – splits a curve into two or more curves. Select the point or points where you want to split the curve, then click.
- **Corner Point** – converts the selected point or points into corner points (Figure 43). Corner points have two movable control points, which are independent from each other. A curved line, therefore, does not go straight through a corner point, but forms a corner.

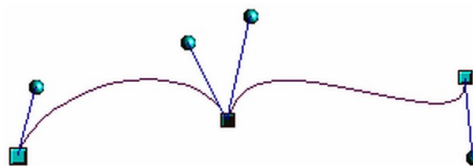


Figure 43: Corner point

- **Smooth Transition** – converts a corner point or symmetrical point into a smooth point (Figure 44). Both control points of the corner point are aligned in parallel and can only be moved simultaneously. The control points may differ in length, allowing you to vary the degree of curvature.

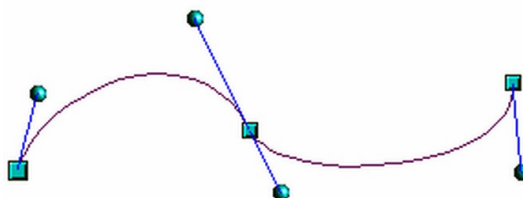


Figure 44: Smooth transition point

- **Symmetric Transition** – converts a corner point or a smooth point into a symmetrical point (Figure 45). Both control points of the corner point are aligned in parallel and have the same length. They can only be moved simultaneously and the degree of curvature is the same in both directions.

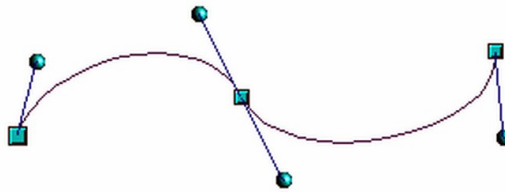


Figure 45: Symmetric transition point

- **Eliminate Points** – The angle from which the point reduction is to take place can be set by going to **Tools > Options > LibreOffice Draw > Grid**.

Adding comments to a drawing

Draw supports comments similar to those in Writer and Calc.

- 1) Go to **Insert > Comment** the main menu bar. A comment box appears with a small marker box containing your initials in the upper left-hand corner of your drawing. Draw automatically adds your name and the date at the bottom of the comment (Figure 31).
- 2) Type or paste your comment into the text box.
- 3) To apply basic formatting to the text, right-click and select the formatting option from the context menu.
- 4) To delete a comment, right-click on the comment or marker box or click on the small triangle in the bottom right of the comment and select a delete option from the context menu.
- 5) To move a comment, click on the small marker box and drag it to a new position.
- 6) To show or hide the comments, go to **View > Comments** on the main menu bar.

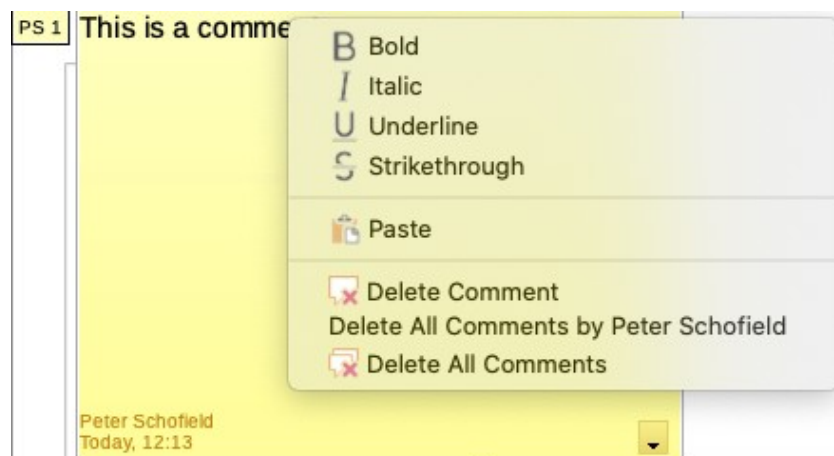


Figure 46: Comment in a drawing



Note

For your initials and name to appear in a comment, you have to enter your user data. Go to **Tools > Options > LibreOffice > User Data** on the main menu bar and enter all the necessary data. If more than one person edits the document, each author is automatically allocated a different background color.

Connecting and breaking lines

It is possible in Draw to connect separate line elements together to make one line, or to break a line that is composed of separate elements.

- To connect lines, select the lines and go to **Shape > Connect** on the main menu bar. The end points on the line are joined together. The resulting shape is a poly line, not a closed shape.
- To break a line that is composed of separate elements, select it and go to **Shape > Break** on the main menu bar. Deselect the object and then select each separate element. Each separate element is indicated with start and end points. Click on an element and drag it to a new position.

Coordinate system

X and Y axes

The x-axis is the horizontal position of an object and the y-axis is the vertical position of an object. The rulers do not show a minus sign if there are negative coordinates. However, the minus sign for negative coordinates is shown in the position field in the **Status Bar** and the **Position and Size** dialog.

Workspace

The Workspace is larger than the drawing page. The area outside the drawing page is one page width right and left and a half page above and below the drawing page. The size of the drawing page is indicated by highlighted portions in the horizontal and vertical rulers.

You can draw objects that are partly or wholly outside the drawing page. However, when the drawing is printed, any portion of an object or an object not on the drawing page is not printed, saved or exported. This allows the Workspace area around the drawing page to be used for drafts when creating objects.

Object position

The coordinates of objects and snap guides are shown relative to the origin. The default origin for coordinates (0.00/0.00 position) is the top-left corner of the drawing page without margins or the top left corner of the drawing page where the margins intersect. To change the default origin, click and drag the intersection of the rulers in the top left corner of the Workspace to the desired position. Guide lines will appear as you drag the default origin to its new position. This origin setting is only for the current view and is not saved in the document.

The area inside the default origin is the area used for the grid when the option Snap to Grid and Display Grid are selected.

To reset the default origin back to its original setting at the top-left corner of the page, double click in the top-left corner on the Workspace where the horizontal and vertical rulers meet.

Accuracy

Draw uses internally integer values in 1/100 mm. Therefore it is not possible to get an exact position for 1/8 inch, for example. Also, many dialog fields are restricted to two decimals.

To work in maximal possible accuracy, go to **Tools > Options > Draw > General** and set the option **Unit of measurement** to Millimeter. The rulers will also show metric units. However, to use your favorite measurement unit, right click on the ruler and select your favorite measurement unit from the context menu.