

CostX® 6.7 Release Notes

CostX® 6.7 is the latest release in the Exactal® range of world-class digital measurement and BIM-enabled estimating software. This release brings a number of much-requested new features and enhancements, including Auto Count, password management capability, significantly improved PDF output when publishing drawings, and – most excitingly of all – the ability to run CostX® in the Cloud which is set to revolutionise your workflow!

Headline Features

- **New Auto Count** capability allowing users to search a 2D drawing for all occurrences of a given symbol, thus enabling bulk counting of repetitive elements, such as electrical, plumbing, and mechanical symbols, architectural items like doors and fittings, or even plants and trees on landscaping plans. The **Auto Count** feature supports both raster and vector drawings in 2D format. Search results include rotated symbols, and the system allows the user to set thresholds for how close the matches need to be, and adjust them dynamically as needed. The user can quickly accept or reject the symbols found on screen and save the results.
- Support for CostX® in the Cloud
 - CostX® now fully **supports native cloud storage for drawing files** used in CostX®. In CostX® 6.7, the cloud storage providers supported are **Amazon S3, Google Drive, and Microsoft OneDrive**. Additional providers will be added in future.
 - CostX® is now officially certified as Citrix Ready, providing the stamp of approval for CostX® interoperability with Citrix. The Citrix Ready designation is awarded by Citrix to third-party partners after successfully passing a set of tests demonstrating compatibility with Citrix. This certification gives customers confidence, knowing that CostX® can be successfully deployed with Citrix solutions either as part of a cloud hosted environment or on premise, without worrying about compatibility issues.
 - User settings can now be optionally stored in a local file rather than in the registry which allows users to keep their settings between sessions when using CostX® in modern cloud based application streaming services such as Amazon AppStream 2.0.
- Printing the drawing window to PDF has now been significantly enhanced, with reduced whitespace padding, clearer dimensions, and significantly improved legend and text, as well as a monochrome drawing option.
- It is now possible to set a password policy when CostX® is used in the Network configuration. Password policies provide you with a way to prevent users from choosing common passwords, enforce password change, and set password length and complexity requirements.

Auto Count

Previously CostX® supported bulk counting of block objects on DWG drawings, as well as bulk counting on BIM drawings, and now there is also support for Auto Count, which leverages image search technology to enable bulk counting of objects on any 2D drawing, including both raster and vector formats.

In Auto Count Mode, you specify the item you are looking for by capturing an image from the drawing. CostX® then searches the drawing for all occurrences of the image. All matches found are highlighted on the drawing, allowing you to review them easily and accept or reject individual matches as counted objects.

Follow the simple steps below to perform Auto Count take-off:

Step 1: Define the scope of the image search.

Define the search scope by setting a working area and/or hiding unnecessary layers. This will restrict the search to visible layers within the working area, thus helping to reduce the time it takes to process the search and produce more targeted results.


You can also choose whether or not to narrow your search to symbols with the same colours or line styles as the captured image. Turn on [Line Styles](#) to refine your search based on line styles; turn off [Monochrome Mode](#) to refine your search based on colours.

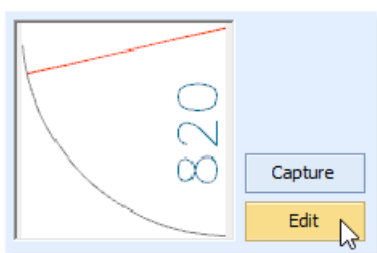
Step 2: Enable the Auto Count tool.


Within a 2D drawing, select the Count type dimension group you wish to measure into to enable Count Mode. The **Auto Count** tab to the left of the drawing window will then automatically become active.

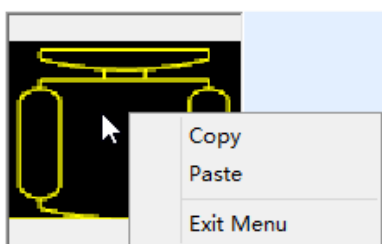
Step 3: Perform image search.

In the Auto Count tab, click the **Capture** button, then hold down the left mouse button and drag a rectangle around the item you want to search for to capture an image. Click the **Search** button to start the search.

 **TIP:** Click the Capture button again to obtain a new image if you are not satisfied with the current one. You can also edit the image by using the Edit button to launch the image editor.



 **NOTE:** It is possible to capture an image on one drawing, and then search other drawings for that image. To do this, use the **Copy** and **Paste** options in the context menu to copy the captured image to the Auto Count tab for the target drawing.



Step 4: Adjust search results.

The **Show Matches Above** slider lets you specify how closely an item must match the captured image for it to be included in the search results. A value of 100% means exact match.


As you move this slider, the number of matches highlighted on the drawing will dynamically change. Based on the screen preview, adjust the slider to highlight as many valid matches as possible, while simultaneously ensuring that the number of false matches does not increase significantly.


Step 5: Review search results.

The **Auto Accepted Above** slider specifies how closely an item returned in the search results must match the captured image for it to be automatically set to the "accepted" state.

Adjust this slider to automatically accept the maximum number of valid matches, then manually accept or reject the remaining matches as described below:

- To accept an **unconfirmed** match (shown in **yellow**), click it once; to reject it, click it twice.
- To change an **accepted** match (shown in **green**) to the "rejected" state, click it once.
- To change a **rejected** match (shown in **red**) to the "accepted" state, click it once.

 **TIP:** If a matching item is not included in the search results, you can manually add it as an accepted match by holding down the Shift key and clicking over the item.

 **NOTE:** If required, the colours of unconfirmed, accepted, and rejected matches can be changed in the Drawings section of CostX Options.

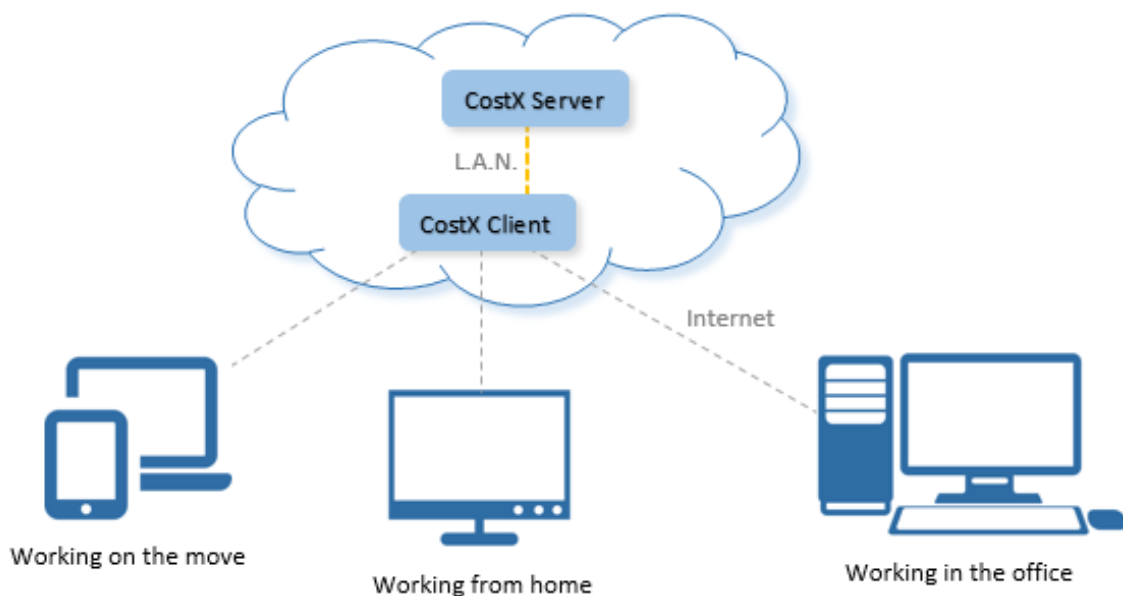
Step 6: Save accepted matches.

After you finish reviewing the results, click the **Save Accepted** button. Accepted matches will be removed from the drawing window and added into the current dimension group as count dimensions.

CostX® in the Cloud

In today's fast-changing business environment and technological landscape, companies are increasingly turning to the Cloud for improved agility and cost efficiencies. To enable our customers to harness the benefits of cloud services, we have developed a number of cloud-based solutions which will provide greater flexibility for CostX® users while simultaneously simplifying IT administration.

From version 6.7 onwards, CostX® can be deployed in the Cloud using various deployment models. One of the options is to deliver CostX® to end users via an application virtualisation platform, such as Citrix XenApp or Amazon AppStream. This allows users to run CostX® over the internet without installing it on their own devices, which means they can access the application anytime, anywhere, on any device (including tablets, PCs, and Macs). The increased accessibility to CostX® will help to improve sharing and collaboration among teams. Even better, IT administrators only need to maintain a single version of CostX®, which makes application management much easier.



With the appropriate infrastructure and configuration, running CostX® on the cloud can offer the same responsive and fluid user experience as running it locally. For detailed information on how to deploy CostX® in the cloud, refer to the following documents which can be downloaded from Exactal [TechWeb](#).

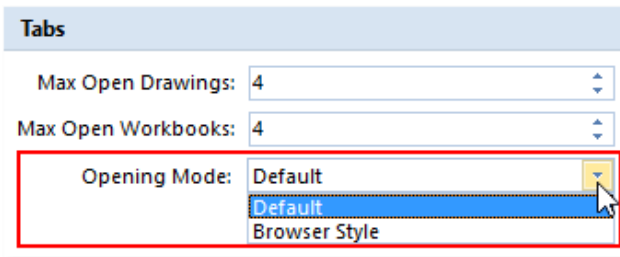
- CostX® in the Cloud – General Overview
- CostX® in the Cloud – Amazon AppStream 2.0
- CostX® in the Cloud – Citrix XenApp Essentials on Azure

Not ready to move CostX® to the Cloud? You can still make use of the cloud storage services. CostX® now allows you to add and work on drawings stored in a number of Clouds, including Amazon S3, Google Drive, and Microsoft OneDrive. Moving your drawing files to the Cloud reduces the need to maintain hardware resources such as disk storage devices. It also provides the ability to easily increase your storage capacity as and when it is required. For details on how to configure CostX® to use cloud-stored drawings, refer to the topic *Cloud Options* in the Help file.

Tab Control

Previously each drawing and workbook would open in a new tab unless the maximum number of open drawings or workbooks had been reached. In CostX® 6.7, you can easily control whether a drawing or workbook is opened in the current tab or in a new tab.

The default open behaviour of drawings and workbooks can be configured in the General section of CostX Options by selecting one of the following two opening modes: **Default** and **Browser Style**. The Default Mode is useful if most of the time you prefer to have the workbooks and drawings open in new tabs, whereas the Browser Style Mode is more appropriate if opening a new tab is only occasionally necessary.



When **Default Mode** is selected, each drawing or workbook is opened in a new tab by default. When necessary, you can use the mouse wheel or CTRL key to temporarily reverse the default behaviour and open a drawing or workbook in the current tab instead. The open behaviour in Default Mode is summarized below.

Action	Selected drawing/workbook opens in:
Left-click the drawing or workbook name	A new tab (unless the maximum number of open drawings or workbooks has been reached)
With the Ctrl key pressed, left-click the drawing or workbook name	The current tab
Click the drawing or workbook name with the mouse wheel	The current tab
Add a new drawing or workbook	A new tab (unless the maximum number of open drawings or workbooks has been reached)

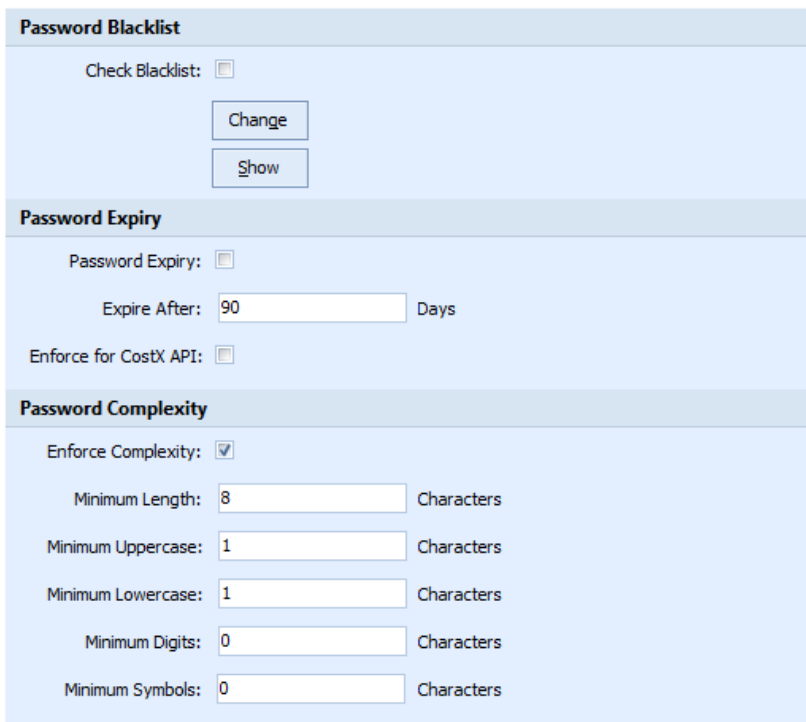
When **Browser Style Mode** is selected, each drawing or workbook is opened in the current tab by default. When necessary, you can use the mouse wheel or CTRL key to temporarily reverse the default behaviour and open a drawing or workbook in a new tab instead. The open behaviour in Browser Style Mode is summarized below.

Action	Selected drawing/workbook opens in:
Left-click the drawing or workbook name	The current tab
With the Ctrl key pressed, left-click the drawing or workbook name	A new tab (unless the maximum number of open drawings or workbooks has been reached)
Click the drawing or workbook name with the mouse wheel	A new tab (unless the maximum number of open drawings or workbooks has been reached)
Add a new drawing or workbook	The current tab

Password Management

The Network version of CostX® can now be configured to use a password policy, which means that passwords entered by users will be validated against a certain set of rules and passwords that do not meet the specified requirements will be rejected.

You can configure the specific rules of the password policy using the **Password Blacklist**, **Password Expiry**, and **Password Complexity** sections on the CostX Settings page of CostX Server Admin.



Password Blacklist

Check Blacklist:

Change

Show

Password Expiry

Password Expiry:

Expire After: 90 Days

Enforce for CostX API:

Password Complexity

Enforce Complexity:

Minimum Length: 8 Characters

Minimum Uppercase: 1 Character

Minimum Lowercase: 1 Character

Minimum Digits: 0 Characters

Minimum Symbols: 0 Characters

A password policy can be set up to:

- Prevent users from choosing commonplace passwords by creating your own password blacklist.
 - 📖 **NOTES:**
 - To create your own list of prohibited passwords, add the passwords, one per line, in a text file. The text file should be saved using UTF-8 encoding.
 - Blacklisted passwords are not case sensitive. For example, if the word "pass" is present in the list, then all uppercase and lowercase permutations of "pass", such as "Pass" and "pAss", will be restricted from being used.
 - Use the Change button to import the blacklist; use the Show button to view the blacklist currently stored in the database.
- Require users to change their password after a specified period of time.
- Set a minimum password length and require specific character types, including uppercase characters, lowercase characters, numbers, and symbols.


The CostX® password policy is disabled by default. It is up to the CostX® Administrator to decide when to enable the policy and what requirements should be enforced. After a new policy is defined and enabled, it takes effect immediately and applies to both new and existing users, including users of CostX Client, CostX Server Admin, and CostXL. Existing users will be required to choose a new password the next time they sign in if their current password does not meet the requirements.

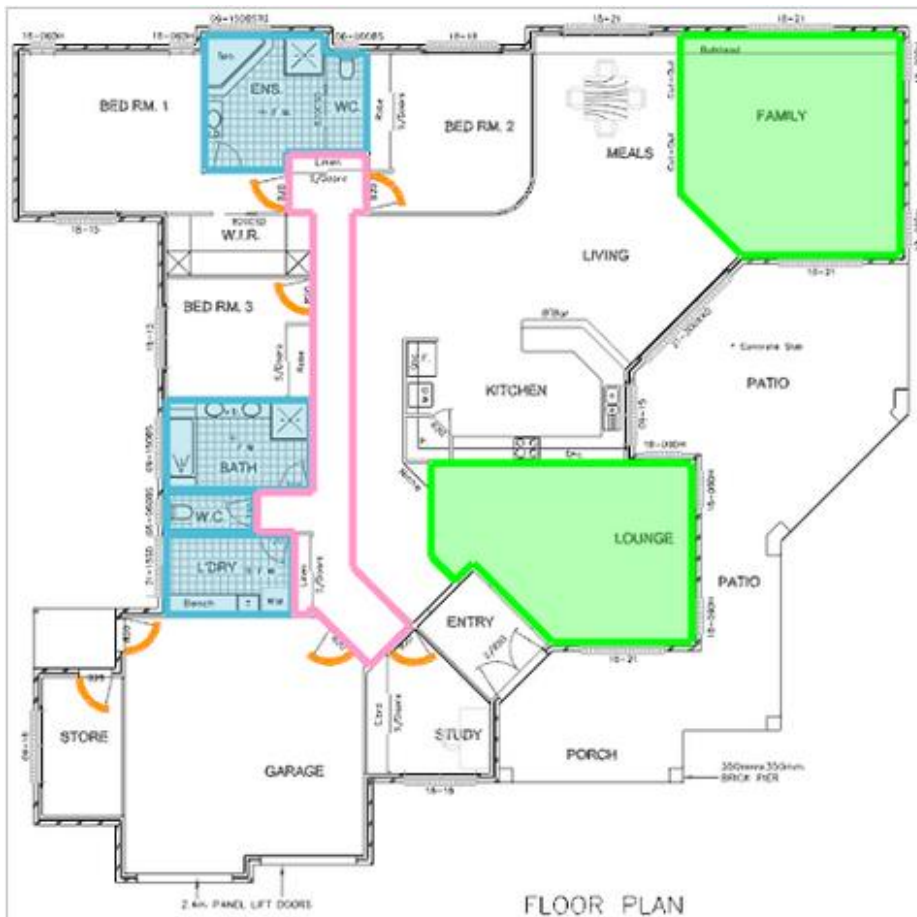
Drawings & Take-off


Monochrome Mode

When working with a multi-coloured drawing, the colours of the drawing itself may interfere with your visualization of measured dimensions on the drawing, making it difficult to work effectively. CostX® 6.7 includes a new **Monochrome** option which allows you to reduce visual clutter resulting from too many colours by turning a color drawing to black and white.

In Monochrome Mode, drawing elements are displayed in white and grey on a dark background and displayed in black and grey on a light background. All drawing elements can still be seen but will no longer interfere with your view of the colored dimensions.

The monochrome effect can be applied to both raster and vector drawings in 2D format. To put a drawing into Monochrome Mode, simply click the  (**Monochrome**) button on the **Drawings** ribbon. The drawing will be turned to black and white, but the dimensions overlaying the drawing will retain their colours, as shown in the example below.

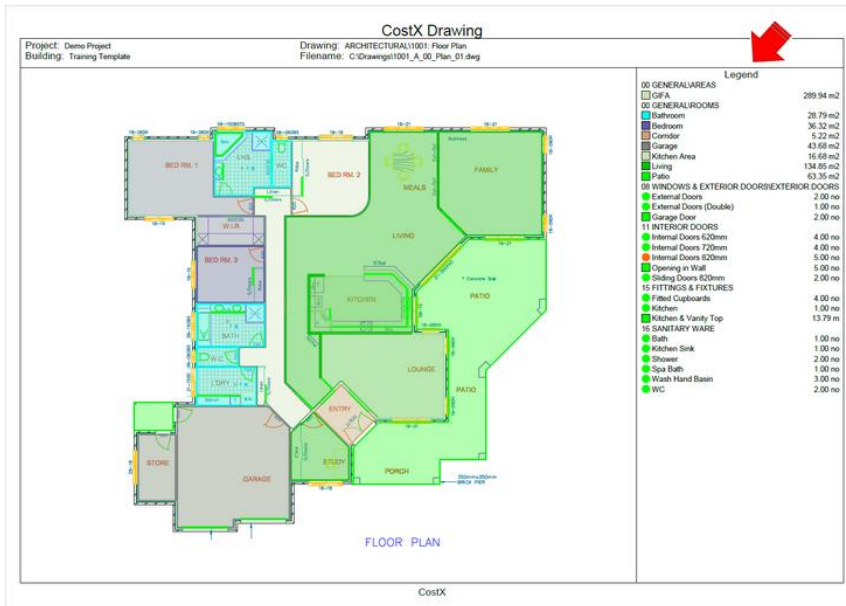


 **NOTE:** Importantly, the Monochrome option is also supported when printing the drawing window to report or publishing it to PDF or DWF. This allows the output file to more clearly show the dimensions on multi-coloured drawings.

Publish Drawing to PDF/DWF

A number of changes have been made to improve the overall appearance of PDF/DWF output.

- The drawing plans are now expanded to fit to the extents of the page as far as possible with reduced white space border padding.
- The PDF/DWF now neatly and clearly shows the items in the legend on the right with clear text and symbols, as shown in the example below. The legend is also no longer limited to 10 items. Displayed items are now grouped by dimension group folders and sub-folders.

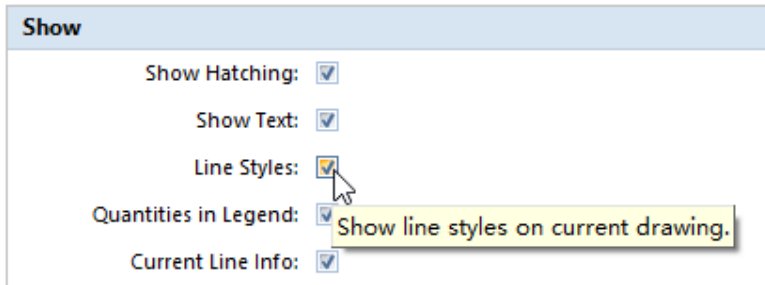


- The visual appearance of dimension lines, especially Point-mode dimension lines, in PDF/DWF printouts has been improved to provide better clarity. The following example shows how Point-mode dimension lines might look after being published to PDF.

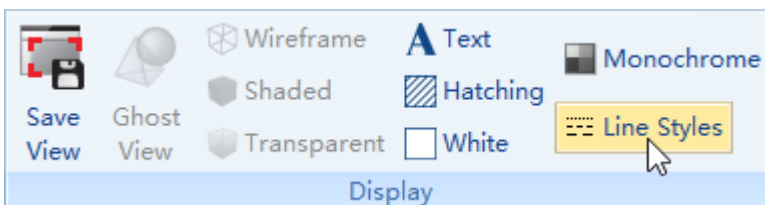


Option to turn line styles on or off

In the **Drawing** section of **CostX Options**, there is a new option that allows you to set whether 2D drawings are loaded with line styles turned on by default. Turning off line styles can significantly speed up the loading of drawings containing many lines with line styles. This option applies as a global default for all newly added drawings.



After the drawing is loaded, whether or not to show line styles can be specified and saved on a per drawing basis using the **Line Styles** button on the Drawings ribbon. When this button is off, all lines are displayed as solid lines.



Line styles are shown in the comparison drawing only when this option is turned on for both drawings being compared.

NOTE: This item was released under CostX® 6.6 R2.

New keyboard shortcuts

- Support for the **Delete** key to delete the currently selected dimension(s) on the drawing.

NOTE: This item was released under CostX® 6.6 R1.

- Instead of having to hide the currently selected object in a 3D model by selecting **Hide Objects In > Current Selection** from the context menu, you can now quickly hide the object by simply moving the mouse over the object and pressing the **H** key. The **H** key can be pressed multiple times to quickly hide multiple objects that are layered on top of the object you want to see.

The **H** key also works as a shortcut for the **Hide Geometry** option in the context menu to allow quick hiding of geometries on non-BIM drawings.

NOTE: In earlier versions of CostX®, if a 2D DWF/DWFX drawing in a Drawing Set contained a hyperlink to another sheet in the same Set, you could click the link while holding down the **H** key to go to the other sheet. You now need to hold down both the **Ctrl** and **H** keys before clicking the link – press and hold the **Ctrl** key before pressing the **H** key, otherwise the object under the hyperlink will be hidden.


Improved behaviour when using Ctrl key in Length mode

The behaviour when using the **Ctrl** key in Length mode has been improved, allowing multiple line segments to be joined smoothly, and dimensions to be selected easily. As part of the improvement, the procedures for performing these two actions have been changed slightly. Follow the appropriate procedure below according to the action you wish to perform.

Adding a multi-segment length


Line Mode – Click the first line segment, then press the **Ctrl** key and move the cursor to the next segment. The line segment that will be appended will be highlighted in royal blue. With the **Ctrl** key pressed, click to measure the second segment, and then continue to move the cursor and click to capture each additional segment.

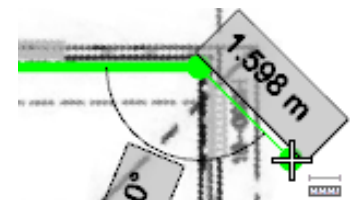
Point Mode – Click the first point, then hold down the **Ctrl** key and click the additional points.

 **TIP:** When adding segments, if the new segment is very close to the dimension, you may need to first move the mouse away, then back to the required position to ensure CostX appends rather than selects.


Adding segments to an existing length dimension


Line Mode – Move the mouse over the existing dimension near the end you want to append to. When you press the **Ctrl** key, and move the mouse away to another line, the line segment that will be appended will be highlighted in royal blue. With the **Ctrl** key pressed, click to measure the new segment, and then continue to move the cursor and click to capture other additional segments.

Point Mode – Move the cursor near the end point of the existing length dimension while ensuring that the cursor still shows the  (Length Mode) symbol, then hold down the **Ctrl** key. A line appears connecting the cursor and the end point of the existing dimension (as shown at right). With the **Ctrl** key pressed, move the cursor and click the additional points.



Selecting a length dimension

Attach the sticky cursor to the length dimension so that it outlines in blue, and then press the **Ctrl** key without moving the cursor away from the dimension. The cursor will change to include the  (Add to Selection) symbol. With the **Ctrl** key pressed, click to select the dimension.

 **TIP:** If you find it difficult to select a length dimension after using the Ctrl key to join line segments, press the ESC key to temporarily prevent the Ctrl key from joining lines, and then select the dimension as usual.

Other new features and improvements

- Support for DWG 2018 file format.
- Reduce the memory required when loading a drawing.
- DWG files with many complex line styles now perform significantly better (with line styles turned on).
- Significant speed improvements when opening the BIM schedule, especially on larger models with many BIM properties.
- Improved the speed of moving or rotating selected dimensions, especially if there are many dimensions selected.

Workbooks

- The workbook total for a Subcontractor Comparison workbook (shown above the workbook and in the workbooks list) has changed to use the “Preferred Total including Allowances” instead of the “Preferred Total”.

Name	Total
Client Bill	190,775
Trade Sort	190,775
Trade Sort Subcontractor Comparison	95,826

B:Description	I:Contingency	J:Margin	K:Adjustment	L:Pref Name	M:Pref Total	N:Pref inc Allow
1 CONCRETE			3,000	C4 Concrete	37,035	40,035
2 FORMWORK				Acme Formwork	55,791	55,791
3 REINFORCEMENT						
4						
5	0	0	3,000		92,826	95,826
6						

Previously the Preferred Total was used as the workbook total.

NOTE: After upgrading to 6.7, the workbook total will be automatically recalculated once you open a Subcontractor workbook. If the workbook is locked or read-only, its total will not be updated until the workbook is unlocked.

- In previous versions of CostX®, if the user copied any data from one row to another in a workbook grouped by code, the target row would become associated with the source row. This sometimes caused the target row to be placed in the wrong category when reverting the workbook to the source format. For example, suppose a two-level workbook is re-sorted as below using codes.

Source Workbook	Workbook Grouped by Code
<p><u>Floor Finishes</u></p> <p>A Wrought softwood skirtings \$3.1/m</p> <p>B White gloss paint \$3.6/m2</p>	<p><u>A Joinery</u></p> <p>Wrought softwood skirtings \$3.1/m</p>
<p><u>Wall Finishes</u></p> <p>B Emulsion paint \$2.8/m2</p>	<p><u>B Painting</u></p> <p>White gloss paint \$3.6/m2</p> <p>Emulsion paint \$2.8/m2</p>

And then in the workbook grouped by code, the rate for “White gloss paint” is copied to the Rate column of “Emulsion paint”.

Workbook Grouped by Code
<p><u>A Joinery</u></p> <p>Wrought softwood skirtings \$3.1/m</p>
<p><u>B Painting</u></p> <p>White gloss paint \$3.6/m2</p> <p>Emulsion paint \$3.6/m2</p>

In earlier versions of CostX®, the item “Emulsion paint” would become associated with “White gloss paint” and therefore be placed under “Floor Finishes” instead of “Wall Finishes” after the workbook is reverted to the source format, as shown below.

Workbook Reverted to Source Format (CostX® 6.6)		
<u>Floor Finishes</u>		
A	Wrought softwood skirtings	\$3.1/m
B	White gloss paint	\$3.6/m2
B	Emulsion paint	\$3.6/m2

To fix this issue, this association is now only kept when copying and pasting the entire row. Using the same example, CostX® 6.7 will correctly place “Emulsion paint” under “Wall Finishes” when reverting the workbook to the source format, as shown below.

Workbook Reverted to Source Format (CostX® 6.7)		
<u>Floor Finishes</u>		
A	Wrought softwood skirtings	\$3.1/m
B	White gloss paint	\$3.6/m2
<u>Wall Finishes</u>		
B	Emulsion paint	\$3.6/m2

- Significant improvements to workbook performance and responsiveness on sheets with many rows or many formulas, including Subcontractor Comparison workbooks.

NOTE: This item was released under CostX® 6.6 R2.

Other

- Various bug fixes in reports.
- Significant speed improvement when generating workbook reports (both Standard and Custom reports), especially for reports that have 3 or more levels. For large reports with many levels, the improvement is more than 50 times faster.
- Significant speed improvement when exporting buildings.

NOTE: The latter two items were released under CostX® 6.6 R1.

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The CostX® Range of Estimating Solutions

Our range of CostX® products recognise that different companies’ estimating requirements are not all the same. CostX® is now in wide-spread use amongst commercial and residential builders, large and small sized quantity surveying firms, subcontractors in all trades and government departments. The product range available allows each customer to choose a cost-effective estimating solution to suit their needs now and in the future. Our innovative CostX® product range includes:



FEATURE	CostX®	CostX® 2D	CostX® Takeoff	CostX® Takeoff 2D
BIM models / 3D drawings	•		•	
2D drawings (incl. PDFs)	•	•	•	•
Auto-Revisoning	•		•	
Workbooks	•	•		
Subcontractor Comparison	•	•		



CostXL
 CostXL allows you to link CostX® data directly into your Excel® spreadsheets



CostX® Viewer
 CostX® Viewer makes it easy to freely share your CostX® projects with anyone.

Contact Us

Exactal welcomes your feedback on this document. If you have any queries, comments or suggestions please use one of the contacts below in your local region.

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