Leica BLK3D Desktop

User Manual
Version 2.0
English

- when it has to be **right**

Leica Geosystems

PART OF HEXAGON

Introduction

Purchase

Congratulations on the purchase of the Leica BLK3D Desktop.

Symbols

The symbols used in this manual have the following meanings:

Type	Description
☞	Important paragraphs which must be adhered to in practice as they enable the product to be used in a technically correct and efficient manner.

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1 Installation

Product registration

Register or use an existing account to login to myWorld:

https://myworld.leica-geosystems.com

1. Click on **myProducts**.
2. Click on **Add Product**.
3. Select **Software**.
4. Insert your entitlement ID (EID). Your entitlement ID can be found on your BLK3D invoice.

Software download

1. Click on **BLK3D Desktop**.
2. Download the installer from the **Software** section.

Software installation

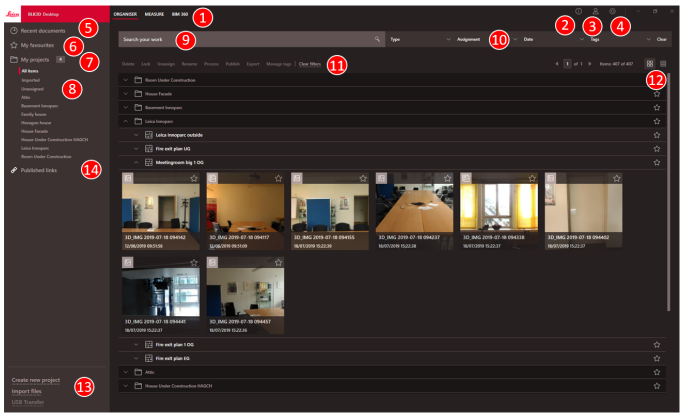
Start the installer on your computer and follow the instructions.

☞ Minimum system requirements for the installation:
Windows 8.1/10 with 64-bit and 6 GB RAM

2 ORGANISER

Overview

The BLK3D Desktop is a special software for organising, measuring and 3D-modelling of data collected with the BLK3D Imager.



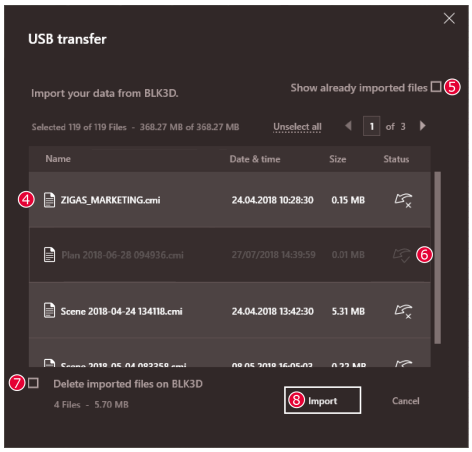
1 Main modules
2 Info screen
Check for licence, software information and available updates
3 User details
4 Settings
5 Recent documents
Display all recently opened files
6 My Favourites
Save files as favourites. Rename a favourite by double-clicking it
7 My projects
Allows navigation between projects
8 Unassigned
Show files which are not project content (Plans, 3D Images)
9 Search function with filter effect. Filter data by their name or tags
10 Filter functions
Type, Assignment, Date, Tags
11 Actions for selected files
Delete, Lock/Unlock, Unassign, Rename, Process, Publish, Export, Manage Tags
12 Switch between list and tile view
13 Handling new files
Create new project, Import files, USB transfer
14 Published Links
Display all the published links (option)

Import files

There are three ways of importing files to the BLK3D Desktop application:

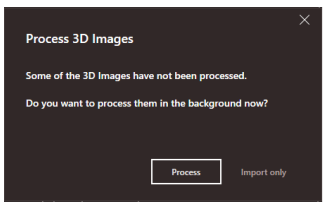
- Import from BLK3D Imager (see the following description)
- Import from computer, using the **Import files** function in ORGANISER
- Import through data path in Settings

Import files from BLK3D Imager



1.	Start BLK3D Desktop software.
2.	Connect the BLK3D to the computer using a USB cable.
3.	**USB transfer** screen starts automatically.
4.	Select files to be imported to the BLK3D Desktop. Use **CTRL** and **SHIFT** key for multiselection. All not yet imported files are automatically selected.
5.	Check **Show already imported files** to display the files that have already been imported to the BLK3D Desktop (optional).
6.	See import status of the files in the **Status** column (**Imported** or **Not imported**).
7.	Check **Delete imported files on BLK3D** to delete transferred files on the BLK3D Imager after completed transfer (optional).
8.	Click the **Import** button.

Process 3D images



☞ Not processed 3D images are automatically detected.

1.	Click **Process** to start the processing of the 3D images in background.
2.	Click **Import only** to continue importing the files without processing them. Files can be processed later.

Status icon

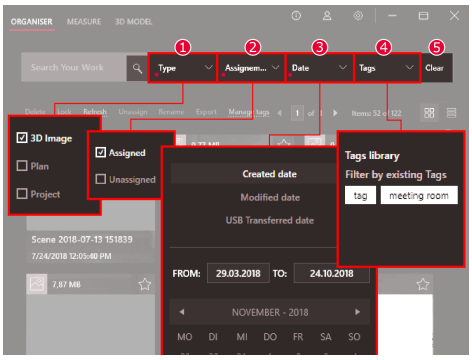
A status icon is assigned to each 3D image preview in Organiser.

Status icon indicates if a 3D image is single-shot or multi-shot:

- Single-shot: single green mark
- Multi-shot: double green mark
- Failed multi-shot: red mark and green one
- No marks: 3D image not processed yet

Filter functions

The BLK3D Desktop application offers different ways of filtering existing files. If a filter option has been set, it is highlighted with a red dot.



1 **Type**
Filter files by Type (3D Image, Plan, Project)

2 **Assignment**
Filter files by Assignment status (Assigned to project, Unassigned)

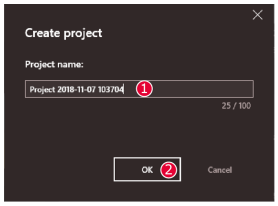
3 **Date**
Filter files by Date (Created date, Modified date, USB Transferred date)

4 **Tags**
Filter files by Tags

5 **Clear**
Clear all filter options

Create new project

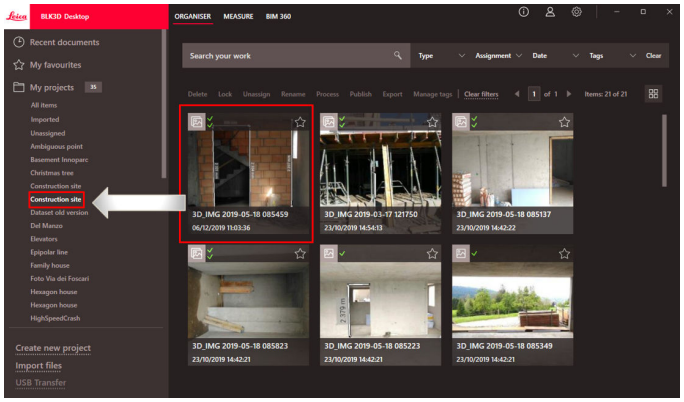
Projects can be used to organise 3D images and plans to get a progressive project documentation for architecture, engineering and construction.



1. Use the **Create new project** function in Organiser to create a project directory. Use the default name or add a custom one in the text field. It is also possible to create a project by clicking in the **My projects** section with the right mouse button.
2. The new project is added to **My projects** section. Plans and 3D Images can be moved into project directories. See section Drag and drop files into a project.

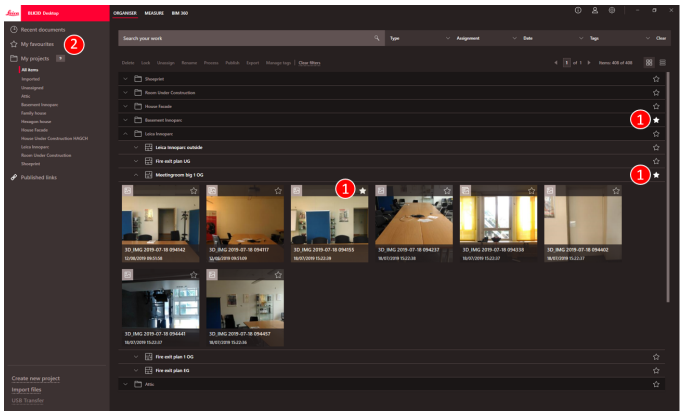
Drag and drop files into a project

Easily rearrange files by drag and drop. Drag and drop one or more 3D Images or Plans at the same time into a project.



My Favourites

The **My favourites** section offers another quick way to access frequently used files.



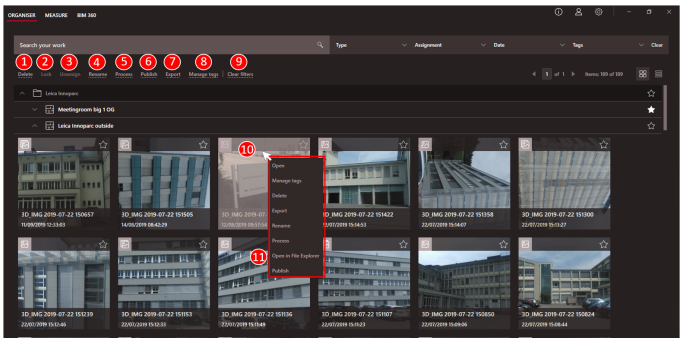
1. Click the star symbol of the files you want to mark as favourites.
2. Check the **My favourites** section to see the favourite files.

To remove files from the **My favourites** section do one of the following:

- Click the star symbol again
- Deleting the files directly from the **My favourites** list
- Use the **Delete** key from keyboard

Actions for selected files

The BLK3D Desktop application offers several options to handle your files. Right-click on an item to open the context menu.



1 **Delete**
Delete selected files

2 **Lock**
Protect selected project from modifications. Unlock using the same function

3 **Unassign**
Removes selected files from a project. The files can then be found in **Unassigned**

4 **Rename**
Rename selected file

5 **Process**
Process 3D Images in the background

6 **Publish**
Publish a link to be shared

7 **Export**
Export selected projects (CMI), plans (CMI, JPG, PDF Plan, PDF Plan+3D Images, DXF 2D, DWG 2D, DXF 3D, DWG 3D) or 3D Images (CMI, JPG, PDF)

8 **Manage tags**
Add or remove a tag from selected files

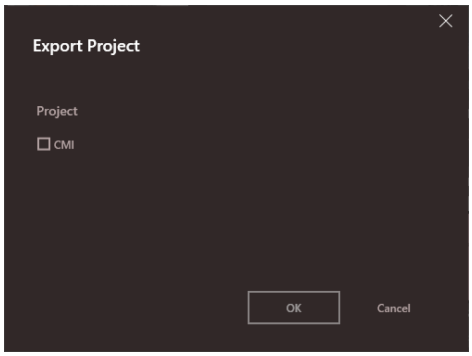
9 **Clear filters**
Refresh display and clear all filter actions. Alternatively press the **F5** key on your keyboard

10 A right-click in the files area opens a menu with all available actions

11 **Open in File Explorer**
Open storage directory in Windows Explorer

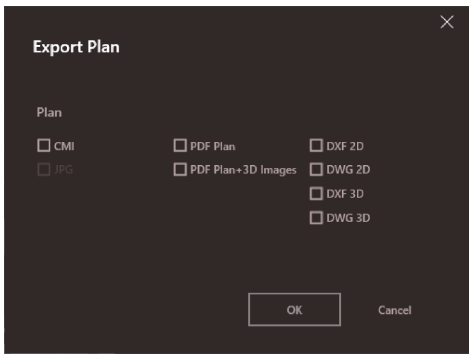
Export Files

☞ Export files with **Export** in the toolbar or in the context menu when clicking the right mouse button.



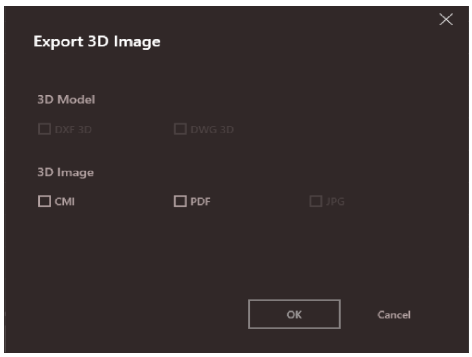
A project can be exported only in CMI format.

The export of multiple projects is also possible.



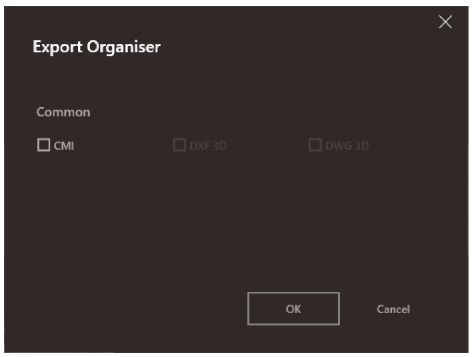
A plan can be exported in different formats:

- CMI, JPG, PDF Plan, PDF Plan +3D Images, DXF 2D, DWG 2D, DXF 3D, DWG 3D
- Export of multiple plans is also possible



A 3D Image can be exported in different formats:

- CMI, JPG, PDF and in DXF 3D, DWG 3D if 3D model exists
- Export of multiple Images is also possible



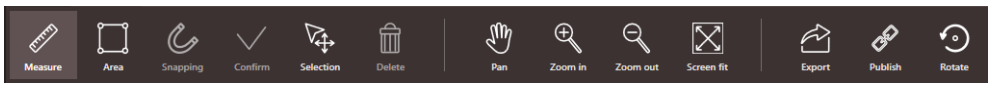
It is also possible to export mixed items (projects + plans + 3D Images), but only in CMI format.

3 MEASURE

Overview

1 Main modules
2 Toolbar
3 Plan window
4 Places window
5 3D Image window
6 Place content window
7 Tabs of opened files in Measure

Toolbar



Measure
Measure distances in picture.

Area
Measure areas in picture.

Snapping
Automatic snap to edges and corners in picture. Position the cursor over the 3D Image and hold it in position for 1 second. The cursor automatically jumps to the snapping position.

Confirm
Finish a distance or area measurement in the picture. Alternatively press the **Enter** button on the keyboard.

Selection
Select point/line/area.

Delete
Delete selected point/line/area. Alternatively press the **Delete** button on the keyboard. **Delete** can be used also to remove selected places or 3D Images.

Pan
Move picture in all directions. Alternatively use the middle or right mouse button for panning.

Zoom In
Increase zoom factor. Alternatively use the mouse wheel to adjust the zoom factor.

Zoom Out
Decrease zoom factor. Alternatively use the mouse wheel to adjust the zoom factor.

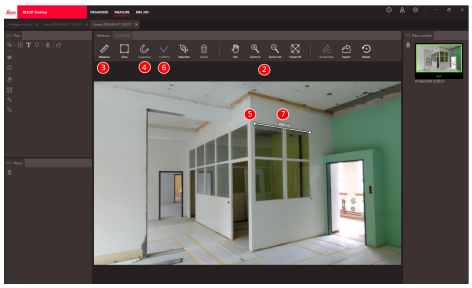
Screen Fit
Adjust zoom factor to screen size.

Export
Export the 3D Image (CMI, PDF, JPG).

Publish
Publish the 3D Image to BLK3D Web (option).

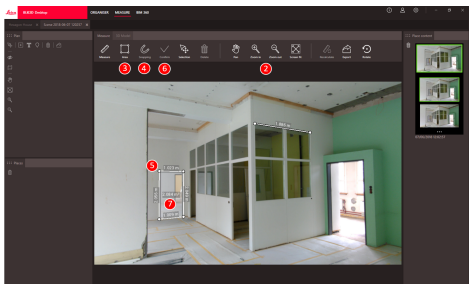
Rotate
Rotate the 3D Image of 90°.

Measure distances in picture



1.	Double-click on a 3D image in ORGANISER to open it in MEASURE mode. Alternatively right-click the file and select **Open** in the context menu.
2.	Optimise the visibility of the distance to be measured by using the **Pan**, **Zoom In** and **Zoom Out** function from the toolbar.
3.	Select **Measure** in toolbar.
4.	**Snapping** function for automatic snapping to edges and corners in pictures is activated by default.
5.	Click the end points of the distance to be measured in the picture.
6.	Click **Confirm** to finish defining the distances or use the **Enter** key from the keyboard. Alternatively confirm with right-click on mouse button.
7.	After a short calculation, the measured results are automatically displayed.
☞	Select and click the line with the right mouse button to check details, change the colour or delete.

Measure areas in picture



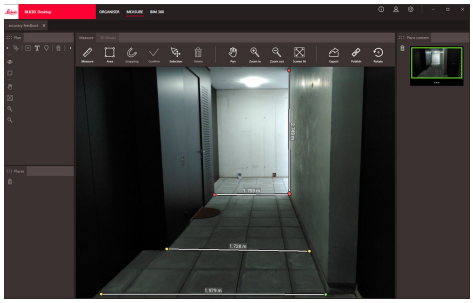
1.	Double-click on a 3D image in ORGANISER to open it in MEASURE mode. Alternatively right-click the file and select **Open** in the context menu.
2.	Optimise the visibility of the distance to be measured by using the **Pan**, **Zoom In** and **Zoom Out** function from the toolbar.
3.	Select **Area** in toolbar.
4.	**Snapping** function for automatic snapping to edges and corners in pictures is activated by default.
5.	Click the corner points of the area you want to measure in the picture.
6.	Click **Confirm** to finish defining the area or use **Enter** key from the keyboard. Alternatively confirm with right-click on mouse button.

7. After a short calculation, the measured results are automatically displayed.

☞ Select and click the line with the right mouse button to check details, change the colour or delete.

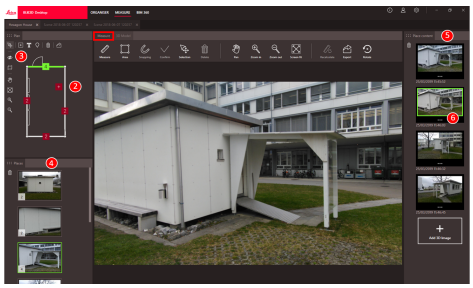
Accuracy feedback

After a point is measured, the point colour indicates the achieved accuracy:



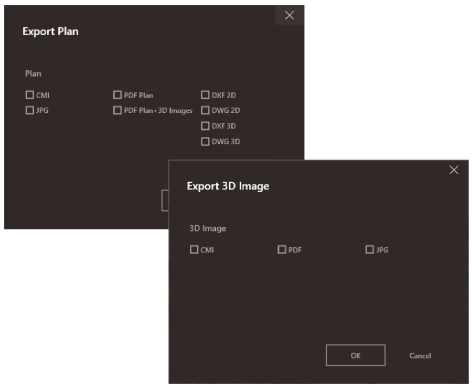
- Green point: accuracy is at the highest level.
- Yellow point: accuracy is reduced.
- Red point: accuracy might be low, especially for 3D distances.

Open plan in MEASURE mode



1. Double-click on a Plan in ORGANISER to open it in MEASURE mode. Alternatively right-click the file and select **Open** in the context menu.
2. Double-click a Place to add a 3D Image. Alternatively you can also use the **Add 3D Image** button from **Place content** window. Choose 3D Image and confirm with **Add**. A plan can store up to 500 3D Images.
3. Click **Add Place** to create an additional Place on the Plan.
4. **Places** window has all the Places with the latest added 3D Image shown as a thumbnail.
5. Select a place to see all the attached 3D Images in the **Place content** window.
6. Click the 3 dots to show all images of the 3D Image.

Export files



Export files with **Export** in the toolbar.

Export Plan in different formats:

- CMI
- JPG
- PDF Plan
- PDF Plan + 3D Images
- DXF 2D, DXF 3D, DXF Raw
- DWG 2D, DWG 3D, DWG Raw

Export 3D Image in different formats:

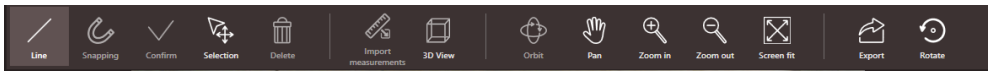
- CMI
- PDF
- JPG

4 3D MODEL (Option)

Overview

1 Main modules
2 Toolbar
3 Plan window
4 Places window
5 3D Image window
6 Place content window

Toolbar



Line
Draw modeling lines on the 3D Image.

Snapping
Automatic snap to edges and corners in picture. Position the cursor over the 3D Image and hold it in position for 1 second. The cursor automatically jumps to the snapping position.

Confirm
Finish a distance or area measurement in the picture. Alternatively press the **Enter** button on the keyboard.

Selection
Select point/line/area.

Delete
Delete selected point/line/area. Alternatively press the **Delete** button on the keyboard. **Delete** can be used also to remove selected places or scenes within 3D Image.

Import measurements
Transfer existing lines/areas from MEASURE to 3D MODEL mode.

3D View
Show modeled lines in a 3D view.

Orbit
3D rotation. Alternatively do a 3D rotation by clicking the left mouse button.

Pan
Move picture in all directions. Alternatively use the middle or right mouse button for panning.

Zoom In
Increase zoom factor. Alternatively use the mouse wheel to adjust the zoom factor.

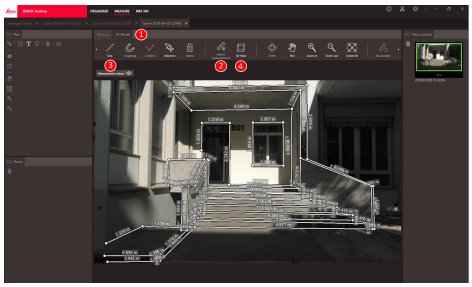
Zoom Out
Decrease zoom factor. Alternatively use the mouse wheel to adjust the zoom factor.

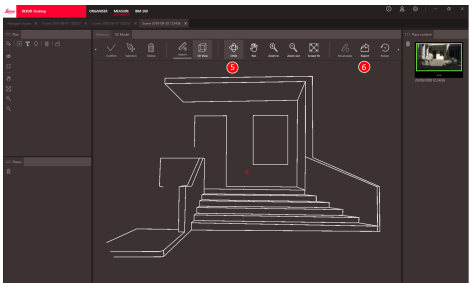
Screen Fit
Adjust zoom factor to screen size.

Export
Export 3D Model (DXF 3D or DWG 3D) or 3D Image (CMI, PDF, JPG).

Rotate
Rotate the 3D Image of 90°.

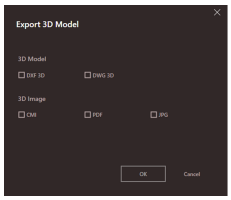
Create 3D Image model





1.	Switch to 3D MODEL tab when a 3D Image is opened in MEASURE.
2.	Click the **Import measurements** button to transfer all the existing lines from MEASURE.
3.	Select **Line** in toolbar to draw more modeling lines.
4.	Click **3D View** button to view all the modeled lines in 3D environment.
5.	Use the **Orbit** function to rotate the 3D model.
6.	Click **Export** to export the model to 3D DXF and DWG format.

Export files



3D Model can be exported in DXF 3D and DWG 3D formats.

5 BIM 360 (Option)

Overview

Autodesk BIM 360 Docs integration with BLK3D allows sharing 3D Images into the BIM 360 environment. The 3D Images can be stored in the BIM 360 Issues. 3D Images stored in BIM 360 Issues can be viewed and measured in BLK3D Web.

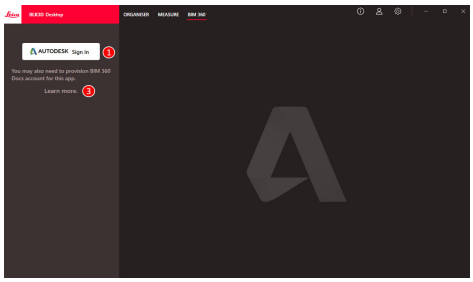
Connecting your BIM 360 account

Establish a connection between BLK3D and your Autodesk BIM 360 account first, prior start using files from Autodesk BIM 360 Docs.

Steps to authorise the BLK3D app within your Autodesk BIM 360 account:

1.	Log in to your BIM 360 account
2.	Go to **Account Admin**
3.	Select the **Apps** tab
4.	Find the BLK3D app and click it
5.	Click on **Add to BIM 360**

Sign-in to BIM 360

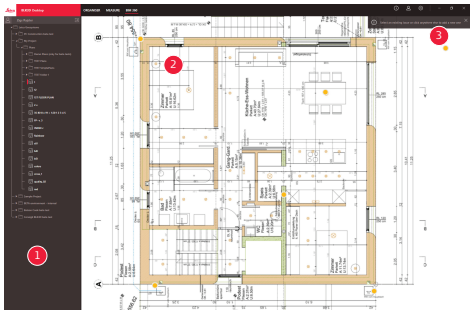


1. Connected to the Internet to use the BIM 360 function
2. Sign-in with a valid Autodesk account
3. Click **Learn more** for more information about Autodesk BIM 360 Docs
4. The Autodesk BIM 360 document content will be visible after sign-in

☞ Only members of an Autodesk BIM 360 Docs project can visualise Autodesk BIM 360 documents.
If you do not yet have access to an Autodesk account, ask an admin to add you as a member.

Create Issues

Click on a document on the document tree view to load it.

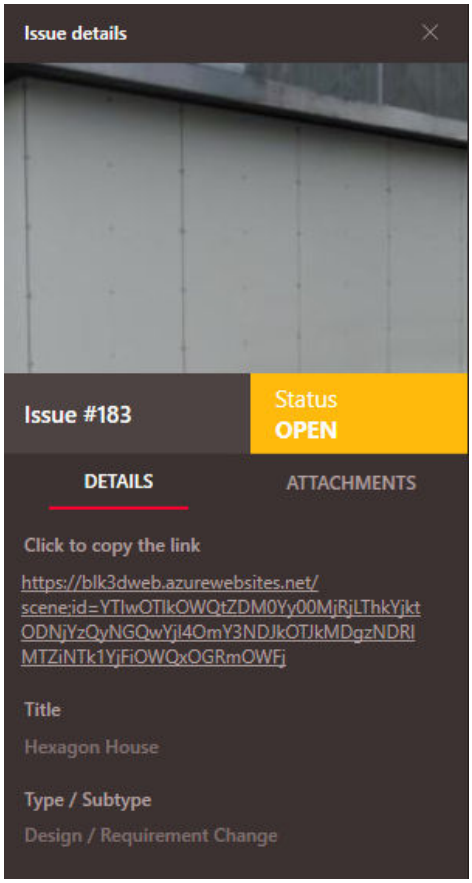


1 BIM 360 document tree view
2 PDF and Issue viewer
3 Instructions on how to create an Issue

To create an Issue, click anywhere on the PDF. This action begins Issue creation.

1 Issue title definition
2 Attaching a 3D Image to the Issue
3 Confirming Issue creation
4 Issue location on the PDF

Once the Issue has been created, a link is automatically generated for the 3D Image. Copy and paste the link in the browser to view and measure the 3D Image in BLK3D Web.



All the Issues and the 3D Images that are created with the BLK3D function BIM 360 are instantly uploaded to the Autodesk BIM 360 Docs cloud.

6 Publisher (Option)

Overview

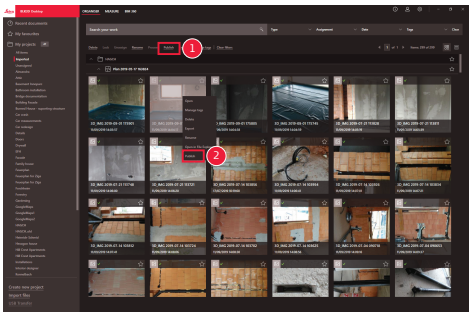
Publisher function creates a copy of the selected file in a cloud. It generates a link which can be used to open the copied file on BLK3D Web.

Any changes done later on the original file on BLK3D Desktop are not merged to the file in the cloud.

Anyone can view the published 3D Image.

Publish a link

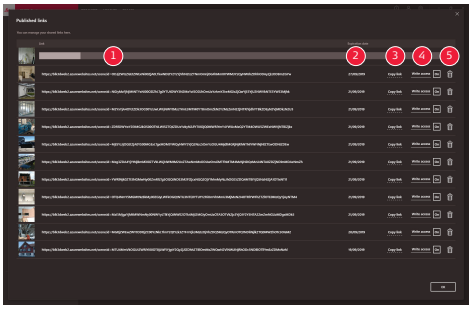
Publish a 3D image using the context menu or the Publish function. To publish a link, the user must be connected to the Internet.



1 Select item and click Publish button on toolbar
2 Right click item to publish using the context menu

Published links

Published 3D Images are available in the section Published links.

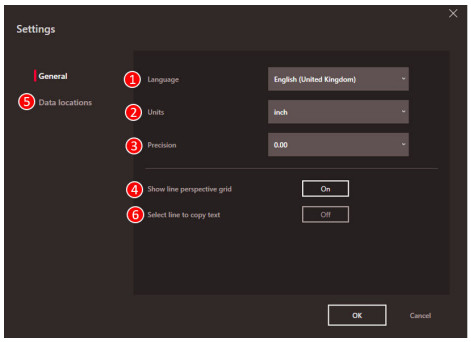


1 Publishing link progress status
2 Link Expiration date. Each published 3D Image is available for 90 days
3 Copy link to clipboard
4 Enable write access
5 Delete Published link. This action also deactivates the link

7 Settings

Settings screen

Modify general settings of the BLK3D Desktop application in the **Settings** screen.

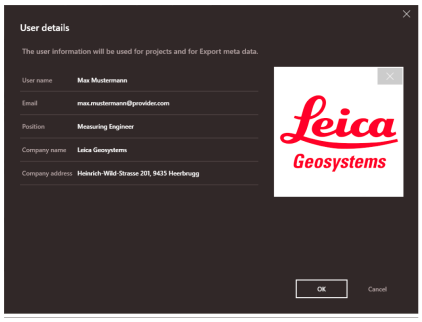


1 Software language
2 Unit for measured distances
Metre, Centimeter, Millimeter, Yard, Foot, Inch, Fractional Feet, Fractional Inch
3 Precision for measured distances
0, 0.0, 0.00, 0.000, 0.0000
4 Show or hide line perspective grid
5 Data Locations
Click **Add** or **Remove** to add/remove a new location where the project files are stored.
Click **Default** to set common data location . Also use a network or cloud drive as needed.
Click **Reload** to read files from all data locations by the BLK3D Desktop software
6 Copy measurement result to clipboard by clicking on measured line

☞ Trigger the **Reload** function by clicking with the right mouse button in the **My projects** section.

User details

Use this screen to enter data. The user information is used for projects and for export metadata.



Info screen

Open this menu to receive the following general information about the installed BLK3D Desktop application:

- **Help**
  The BLK3D Desktop online help is displayed in a browser window.
- **Update**
  Current software version and renewal/expiration date of the used licence is displayed.
- **Licence**
  Link to CLM application to manage the Leica licences.
- **About BLK3D Desktop**
  General information: Software version, copyright and so on.

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PART OF HEXAGON

- when it has to be **right**