

FARO[®]

VISUAL INSPECT™



VISUAL INSPECT™

App Store Version User Guide

Functional range

- Comfortable navigation by innovative handling
- Browse product structures with help of a tree view and preview pictures
- Quick and easy viewing of 3D data
- Move, rotate and zoom by intuitive multi-touch functionality
- Hide/show single parts and complete products
- Configurable viewing settings

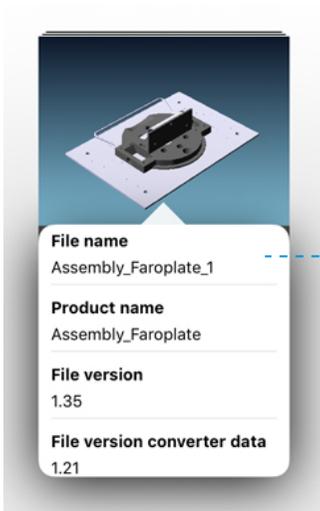
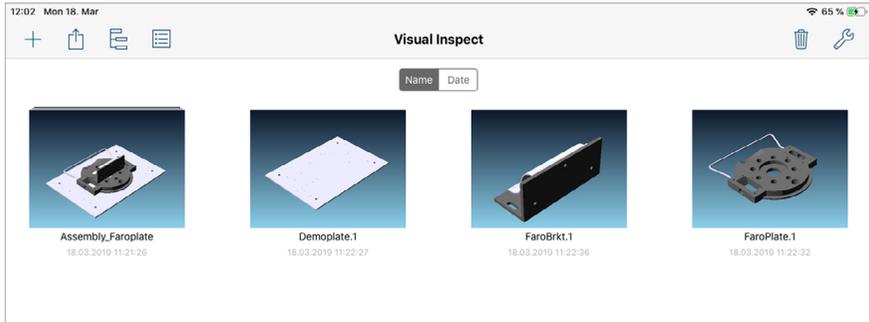
FARO Technologies, Inc. Internal Control File Locations:

https://knowledge.faro.com/Software/Factory_Metrology/Visual_Inspect/User_Manuals_for_Visual_Inspect_Apps

Product number: Prdpub95_FARO_Visual_Inspect

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1. Local files

Launching the app shows the **LOCAL FILES** area.

All available data on the device is displayed here. Single files are displayed as preview thumbnails.

If a product structure is available, the file will be displayed as a stack. Under the preview picture, the product name of the file and the download date display.

1.1. General Functionality

Double-tap an image stack to see the **3D VIEW** of the selected file.

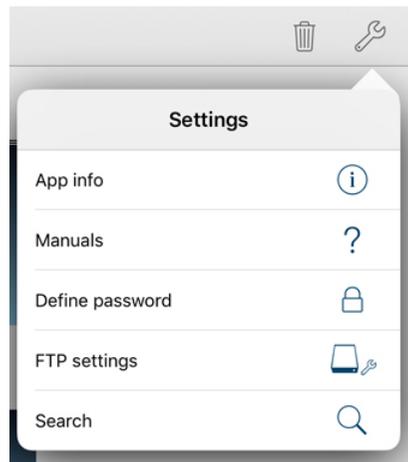
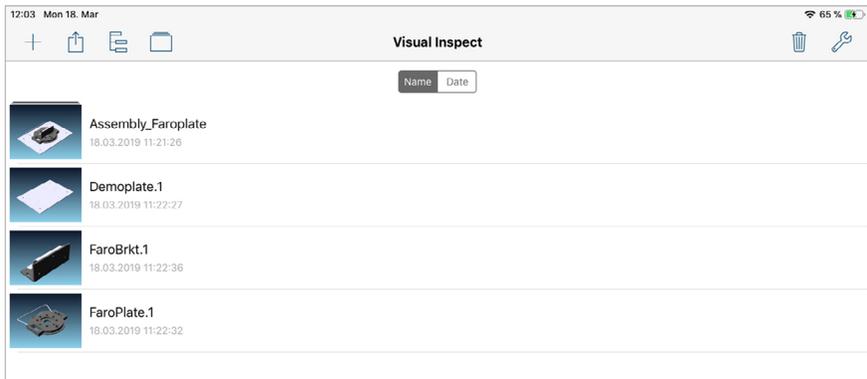
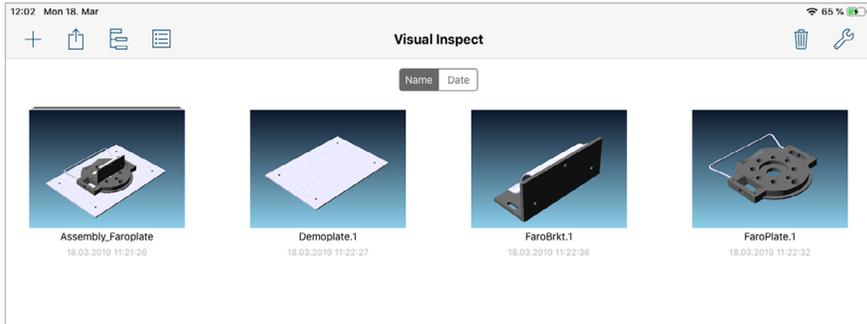
Long-press an image stack to open a **DELETE** icon. Tap the icon to delete the selected file.

Double-tap the file name to display a file information popover. Data includes file name, product name, file version, format of the source data, as well as the creation and download date.

NAME/DATE segments (only on the highest level): Tap to sort local files by name or by download date.

Pinch-out gesture on an image stack: The selected stack opens to display all components contained in the next deeper level of the product structure. Lift fingers from the screen while pinching out to show the next deeper level. Change the direction while pinching and lift the fingers from the screen to stay in the actual level. Pinch in on a deeper level to close it.

^ The **UP** command (only in deeper levels): Tap to close the current level and view the components of the next higher level.



On the left of the toolbar, the following commands are:

- + The **IMPORT** command: [See page 6](#)
- 📁 The **EXPORT** command: [See page 7](#)
- 📁 The **PRODUCT TREE** command: [See page 10](#)
- ☰ The **LIST VIEW** command:

Tap to change the local files view from a stack to list view. This view displays local files in a clearly arranged list instead of in stacks. In list view, the toolbar commands are still available. The list can be sorted by name or date. Double-tap a line in the list to open the 3D view. **FILE SEARCH** can also be used in the list.

→ [See page 9](#)

List view does not allow drilling to deeper levels, to delete elements by long press, or to show additional information.

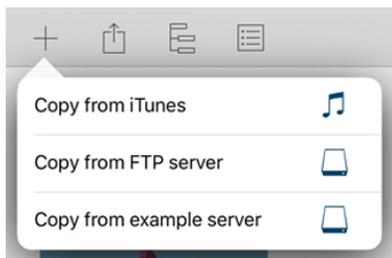
Tap the **STACK VIEW** command  to toggle back to stack view.

On the right, the following commands are:

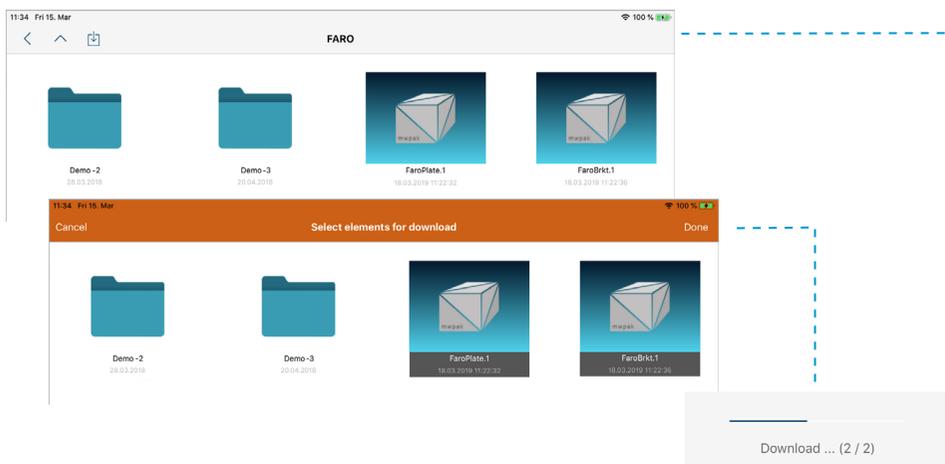
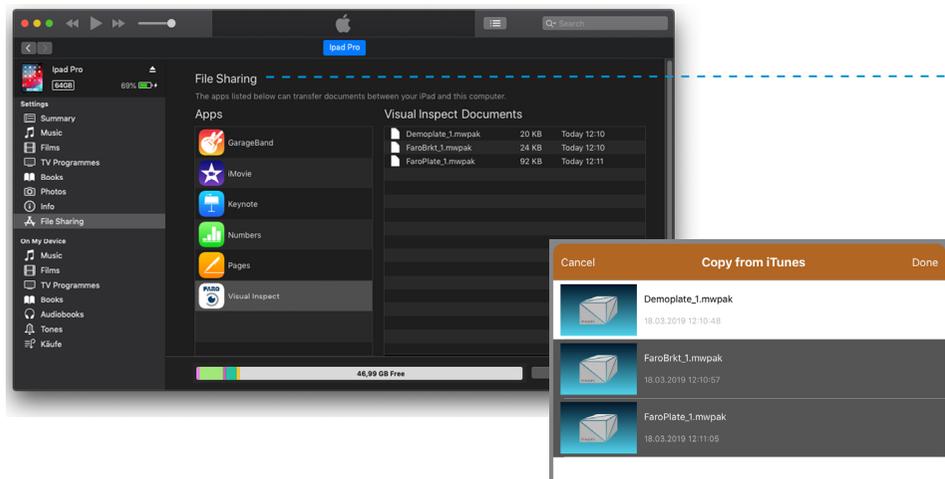
 **TRASH** command (only on the highest level):
Tap to multi-select files for deletion. All selected files are marked with a delete button. Delete by tapping **DONE**. All marked stacks will be deleted, or cancel the process by tapping **CANCEL**.

 **SETTINGS** command:
Tap to open an options popover.

→ [See page 8](#)



→ **Please note:**
The app only accepts data created with the data converter **VISUAL INSPECT CAD TRANSLATOR**.



1.2. Import Files

Tap the **IMPORT** command to open an import options popover.

Import from iTunes:

Tap the **COPY FROM iTUNES** command in the popover to open a list of files priorly loaded to **iTUNES**.

Select/deselect files in the list by tapping the respective row. Selected files highlight in gray.

Press **DONE** in the upper toolbar of the list to start the import of selected files. Press **CANCEL** to close the list without importing files.

Import from FTP:

Tap the **COPY FROM FTP SERVER** option in the popover to download a file from a defined FTP Server. This option is only available if a download FTP server was defined in the **SETTINGS**.

Double-tap a folder to view the contents of the folder.

- Tap the **UP** command on the toolbar to go up a level.
- Tap the **BACK** command on the toolbar to return to **LOCAL FILES**.
- Once on the desired level, tap the **DOWNLOAD** command on the toolbar to start the selection of files. The upper toolbar will change while the selection is active. In this state, select or deselect files by tapping them. If all desired files are selected, start the download by tapping **DONE**. Tap **CANCEL** to abort the selection process and reset the selection.

Tap the **COPY FROM EXAMPLE SERVER** command in the popover to access a test server with example files. The handling is the same as described above.

Import from Email / Airdrop:

Files can also be sent as email attachments or via **AIRDROP** to the device. There the file format and the corresponding app will be automatically recognized and the file can be opened directly in **VISUAL INSPECT**.

These transfer options place the files under **LOCAL FILES**.



1.3. Export Files

Under **LOCAL FILES**, export data by tapping the **EXPORT** command  on the toolbar. To export the complete file select the highest level. Or export from a deeper level of the file, which will only export the substructure. In each instance, a popover displays available export options.

Tap **SEND FILE**  to export with a transfer method selected later. Tap **SEND FILE TO OTHER APP**  to export to another app installed on the device. Tap the **MWPAK** command in the dialog box which opens now. This sends the complete **MWPAK**, including the product structure and the geometry data.

A view with different file sharing options displays. Options available vary by device, installed apps, and user settings. The options are described below:

Airdrop:

If **AIRDROP** is activated, send the selected file to a device where AirDrop is also activated.

Mail:

If an email account was set up in the build-in **MAIL** app, then this option displays. Select it to open a new email. The selected file is automatically attached.

FTP:

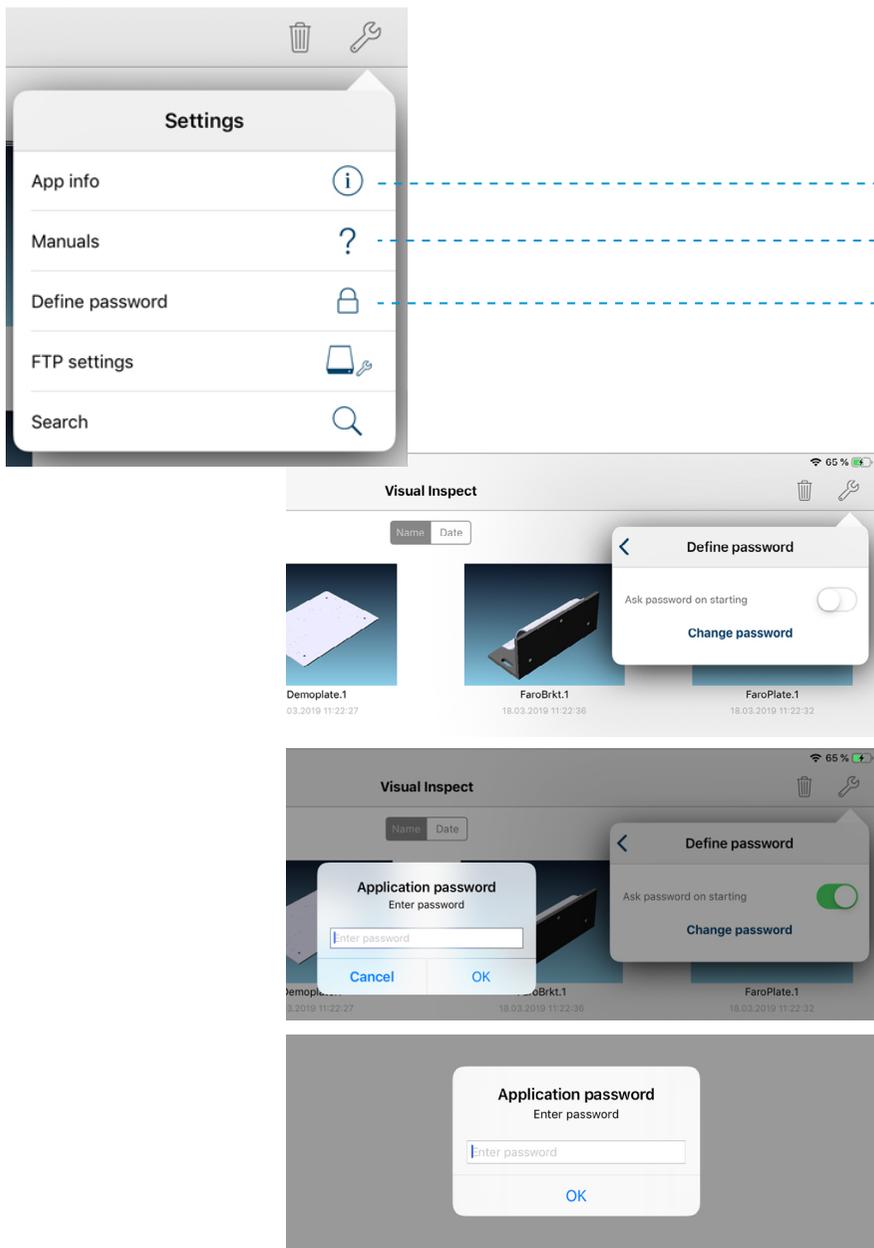
If an FTP upload server is defined in the **FTP SETTINGS** under **UPLOAD SETTINGS**, a server connection will be established. The process is the same as for importing files via FTP. Select the **EXPORT** command  and the file will be uploaded to the appropriate level.

iTunes:

Connect your iPad after exporting to iTunes and find the exported file in the file sharing area of Visual Inspect in iTunes. Copy the file from there.

Other app:

The exported file is sent to the selected app and may be opened from there. Available apps in the export dialog depend on which apps are installed and which apps support the export format.



→ **Please note:**
If the password is forgotten, the application will not start anymore. To recover the app, delete the complete application from the device and reinstall.
NOTE: All data will be lost.

1.4. Local files settings

1.4.1. App info

Tap the entry **APP INFO** ⓘ in the **SETTINGS** popover in the **LOCAL FILES** area to open a general information view (e.g. developer and app version). Here you are also able to register **VISUAL INSPECT** as described in the **QUICK START GUIDE**.

1.4.2. Manuals

Tap **MANUALS** ? in the popover to display a list of available manuals. Tap an entry from the list to open the manual; tap the **DONE** command to close the manual. Manuals in English are always available on the device. To view a manual in any of the other supported languages (French, German, Italian, Japanese, Simplified Chinese or Spanish), tap the **DOWNLOAD** command ⏴ if your iPad is set to that language. If a newer version of an already downloaded manual is available, the software will display an **UPDATE** button ↻. Tap it to update the manual. Your iPad needs to be connected to the Internet for downloading or updating. After that, you can use the manuals offline too.

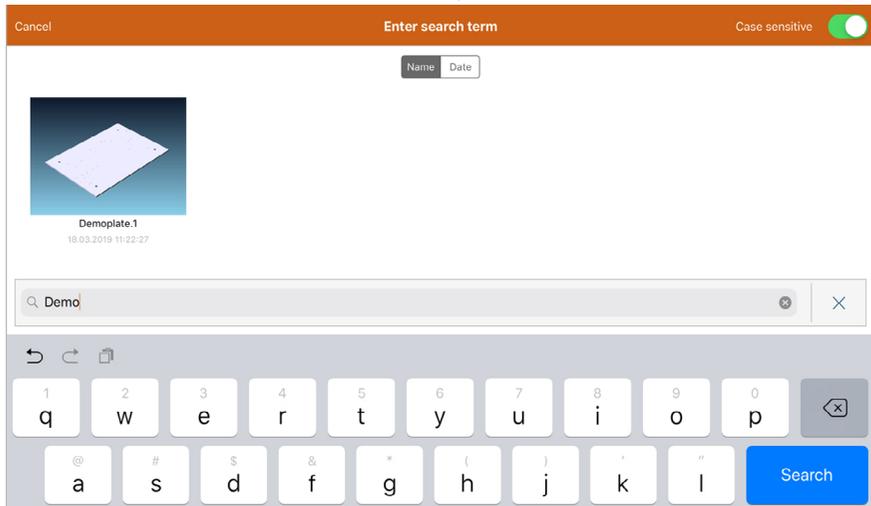
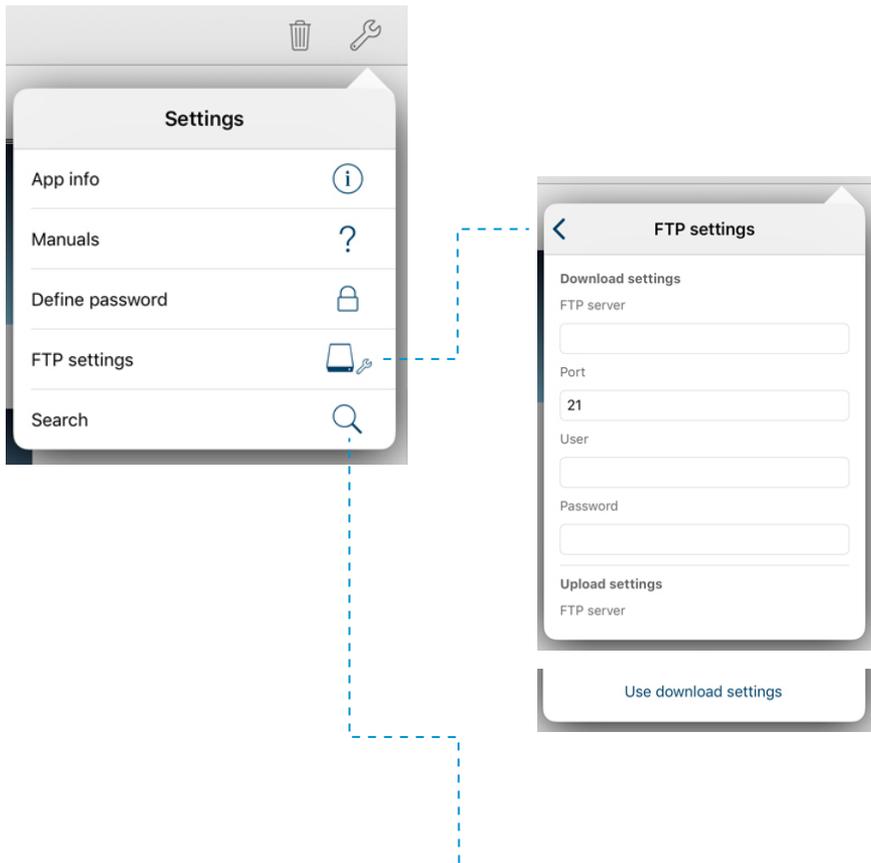
1.4.3. Define password

Tap **DEFINE PASSWORD** 🔒 in the popover to create a password for the application. The password is required each time the application is opened.

After tapping the option from the list, a new view opens. Slide the **ASK PASSWORD ON STARTING** switch to the right and enter the desired password. Tap **OK** and enter the password again. The password is saved if both entries match. If passwords do not match, an error message displays and the process ends. Tap **CANCEL** to abandon the process at any time.

If a password was defined successfully, the password prompt will display each time the app starts. The application will only start if the correct password is entered.

Deactivate a defined password by tapping **CHANGE PASSWORD** and closing the switch; alternatively, change the password. In either case, the original password must be entered to allow changes.



1.4.4. FTP Settings

Under **FTP SETTINGS**  define an FTP download server (for data import) and an FTP upload server (for data export).

Complete the **FTP SERVER**, **PORT**, and **USER** fields. The **PASSWORD** field must be entered only if a password is defined for your server.

When using the same settings for download and upload servers, adopt the settings you entered in the **DOWNLOAD SETTINGS** section by tapping the **USE DOWNLOAD SETTINGS** command. This command is at the bottom of the **UPLOAD SETTINGS** section.

1.4.5. Search in Local Files

Tap the **SEARCH** option  in the popover to open a search bar and keyboard.

Enter a search term to find files containing the search term.

Search is case-sensitive; upper and lower case letters are respected.

NOTE: Case sensitivity can be turned off by sliding the **CASE SENSITIVE** switch to the left on the upper toolbar.

The search functionality is available on each level of the local files. Tap **CANCEL** on the toolbar to abandon the search, or tap  in the search bar.

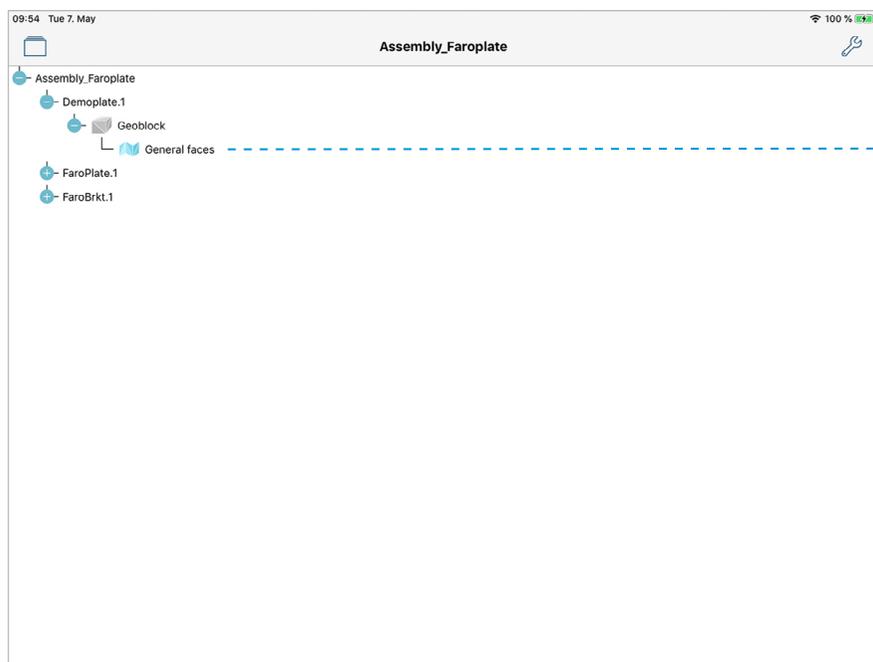
2. Tree View

Tap the **TREE VIEW** command  in the **LOCAL FILES** area and select a file if necessary, the tree view opens and the product structure of the selected file displays.

A product structure can contain several levels containing the components and their geometry.

A single component always contains a geoblock where geometry general faces are stored.

This structure will be extracted from the original CAD data by the **VISUAL INSPECT CAD TRANSLATOR**, depending on the defined settings.



2.1. Functionality

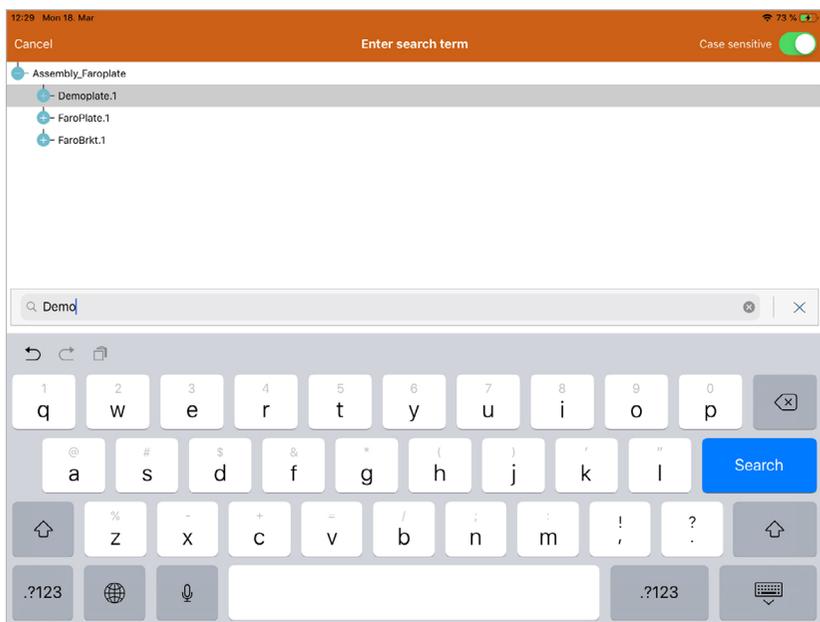
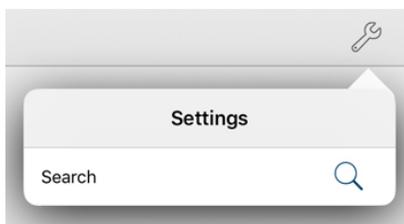
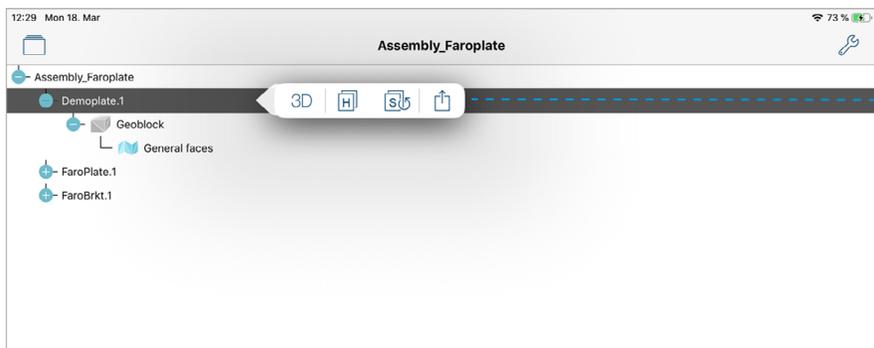
 /  Tap the **STACK/LIST VIEW** on the upper toolbar to show the selected component in the **LOCAL FILES** area.

 Tap the **SETTINGS** command on the toolbar to open a popover with different options.

→ [See page 11](#)

 Tap the **OPEN LEVEL** command to open the next level of the tree view.

 Tap the **CLOSE LEVEL** command to close the current level.



Double-tap the name of a component to open a context menu.

3D Tap the **3D** command in the context menu to change to 3D view of the selected component.

H / S Tap the **HIDE/SHOW** command on the context menu to toggle visibility of the selected component. Visibility is respected in the 3D view.

S Tap the **RESET VISIBILITY** command on the context menu to reveal all hidden components.

E Tap the **EXPORT** command on the context menu to export the selected component, including all subcomponents, as an independent file. The behavior is the same as exporting in the **LOCAL FILES** area.

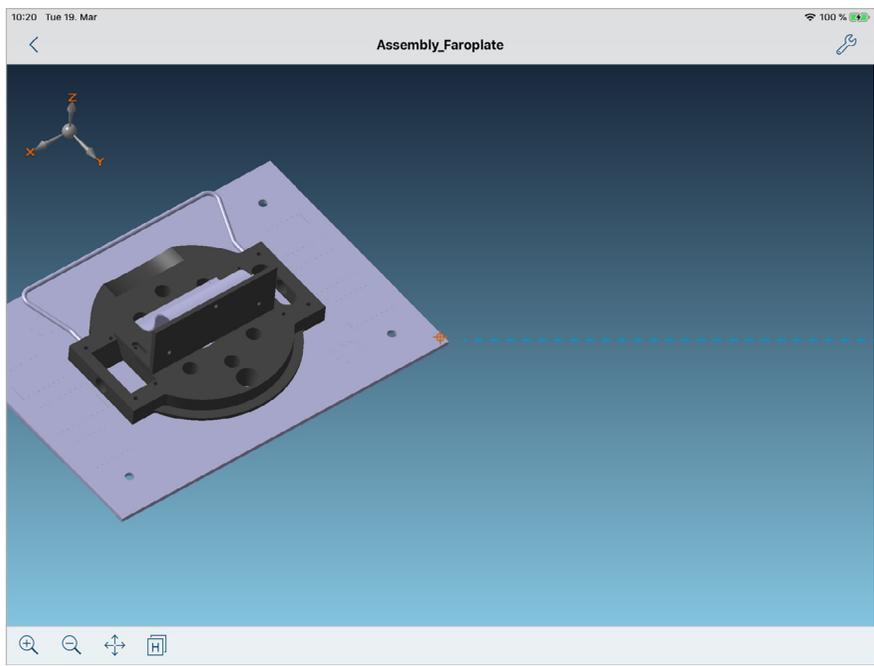
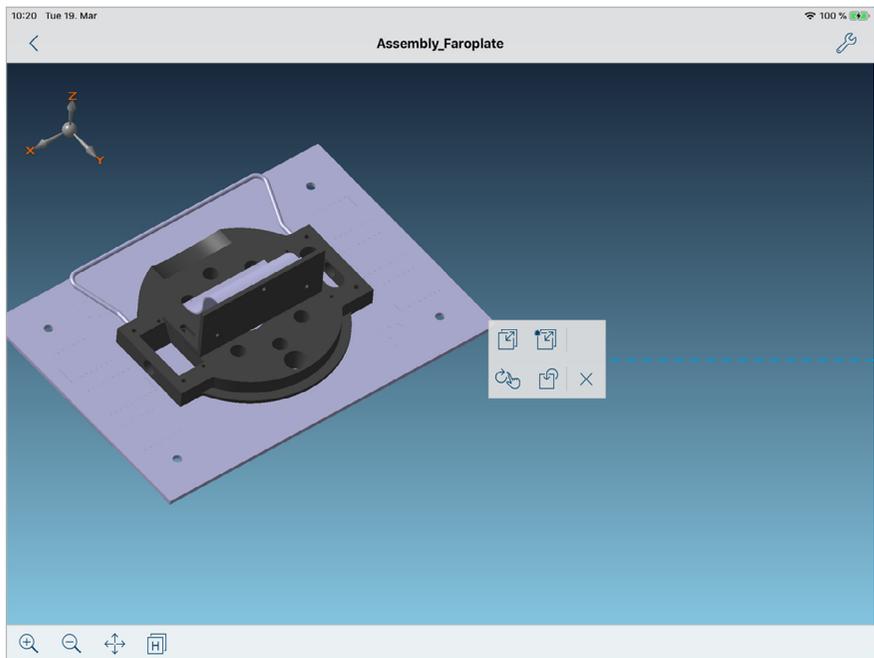
→ [See page 7](#)

2.2. Tree View Settings

2.2.2. Search in Tree View

Tap the **SEARCH** command  in the **SETTINGS** popover to start a search. Enter a search term to search the product structure of the tree as described under **FILE SEARCH**. The results display in gray and the tree structure opens as needed.

→ [See page 9](#)



3. 3D View

3.1. Manipulating the 3D Model

Manipulate the 3D view using the following gestures:

Move with one finger:

Rotate the 3D object.

Move with two fingers maintaining the same distance:

Move the 3D object.

Pinch in/out with two fingers:

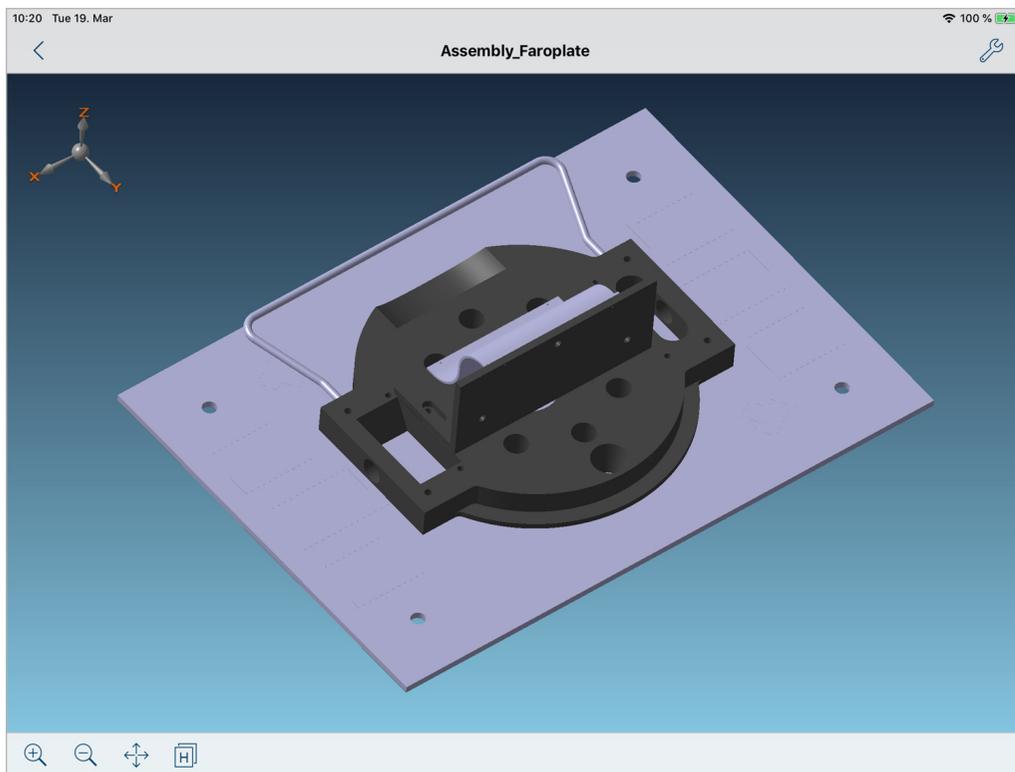
Zoom in/out.

3.2. Overview functionality

Tap the 3D object:

The respective context menu opens.

-  /  Tap the **TOGGLE VISIBILITY** / **MULTI-TOGGLE VISIBILITY** command on the context menu to change visibility of the selected object. → [See page 14](#)
-  Tap the **ROTATION POINT** command on the context menu to set a new rotation point at the tapped point. The rotation point will be shown by small cross hairs while rotating.
-  Tap the **ROTATE TO FACE** command on the context menu to rotate the tapped face parallel to the screen.
-  Tap the **CLOSE** command on the context menu to close it, or tap another point on the 3D object the menu will close automatically and open again at the new position.



< Tap the **BACK** command on the upper toolbar to return to the view the 3D view was started from. This could be the **LOCAL FILES** area or the **TREE** view.

🔧 Tap the **SETTINGS** command in the upper toolbar to open the settings for the 3D view.

→ [See page 16](#)

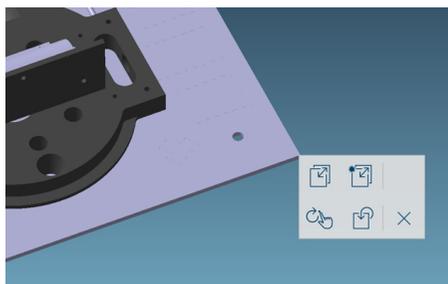
🔍 Tap the **ZOOM IN** command on the lower toolbar to zoom in step by step.

🔍 Tap the **ZOOM OUT** command on the lower toolbar to zoom out step by step.

↔ Tap the **FIT OBJECT** command on the lower toolbar to fit the 3D object in the center of the screen.

🔍 / 📄 Tap the **HIDE / SHOW** command on the lower toolbar to toggle visibility.

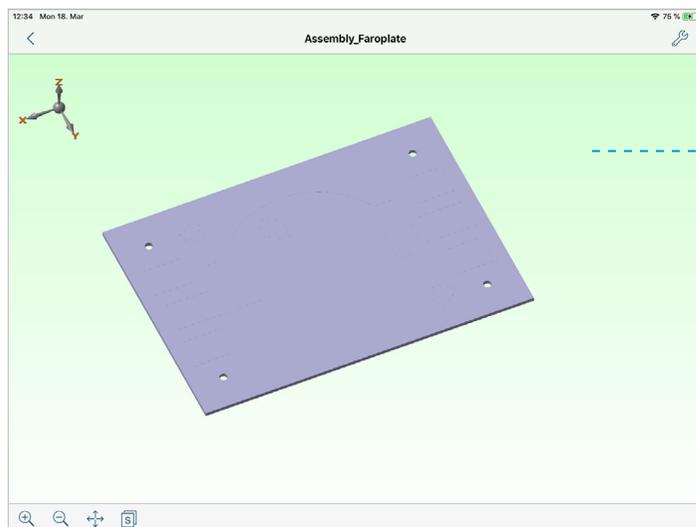
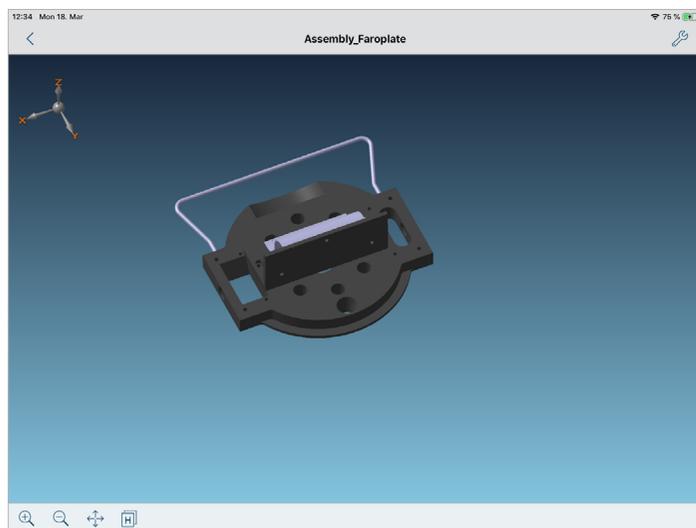
→ [See page 14](#)



3.3. Hide / Show

Tap the **TOGGLE VISIBILITY** command on the 3D context menu to change visibility of the selected object.

Tap **MULTI-TOGGLE VISIBILITY** command on the context menu to activate multi-selection. Multi selection mode will be highlighted by appropriate text message on the upper toolbar. Any element selected in this mode will be hidden / shown accordingly. To quit multi selection mode you can tap **CANCEL** in the toolbar, or open the context menu again by tapping in the free space and selecting the **MULTI-TOGGLE VISIBILITY** command again.



Tap the **HIDE VIEW** command on the lower toolbar to switch to hidden elements view. Any hidden components are visible in this view. For a better overview, the background in this area has a different color.

Tap the **SHOW VIEW** command on the lower toolbar to switch to visible elements view.

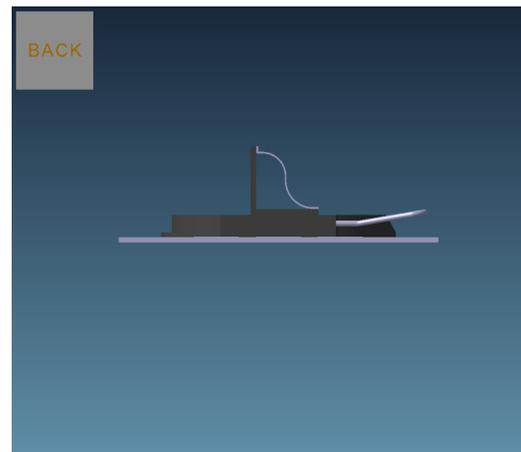
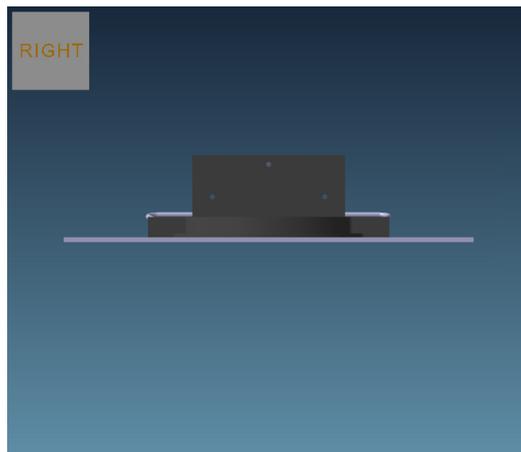
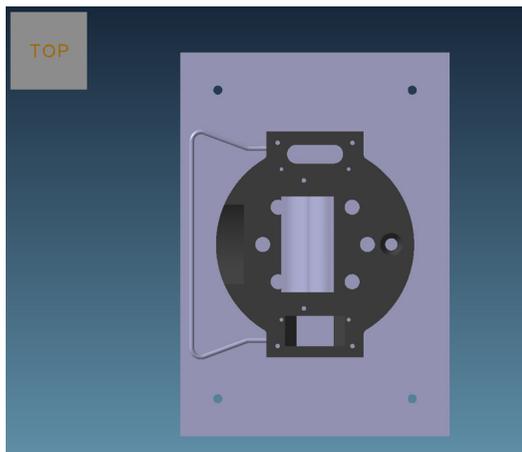
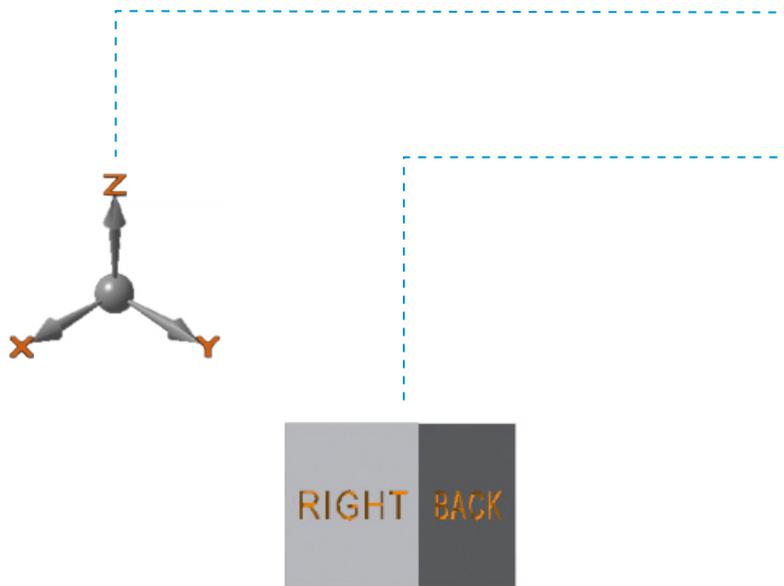
3.4. Axis System and View Changer

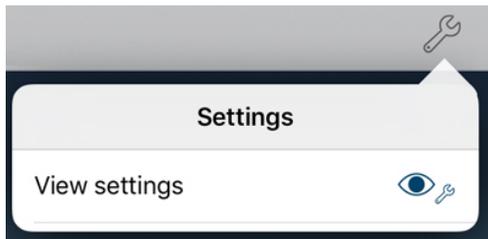
In the standard view mode an axis system is located in the upper left corner of the 3D view. This axis system follows all rotations of the 3D object, which makes orientation in space easier.

Double-tap the area of the axis system changes it to a cube view with the labels **TOP**, **BOTTOM**, **RIGHT**, **LEFT**, **FRONT** and **BACK**. In this mode, rotating and moving with one or two fingers is deactivated.

Swipe the display in a direction to rotate the model in that direction.

Double-tap the 3D Cube to return to the original axis system and normal handling of the 3D view.

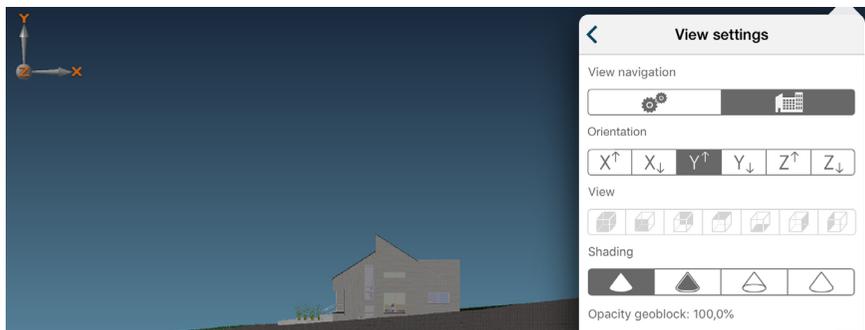




View navigation



Orientation



3.5. 3D view settings

Tap the **SETTINGS** command in the upper toolbar of the 3D view to open the settings popover.

3.5.1. View settings

Tap the **VIEW SETTINGS** entry to display several view options.

Tap **VIEW NAVIGATION**:

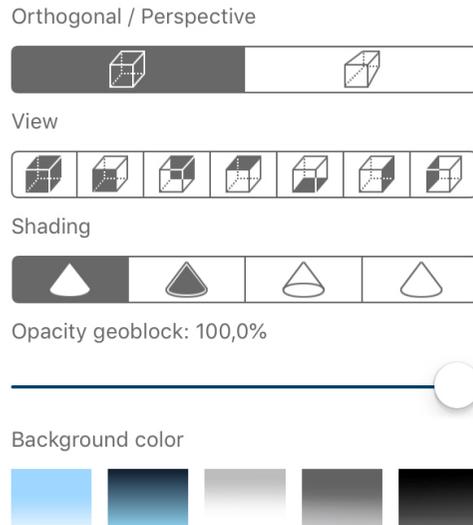
1. Tap **NORMAL** for navigation as described above ([See page 12](#)).
2. Tap **ARCHITECTURE NAVIGATION** to add an additional segmented control, **ORIENTATION**. With these segments, the direction of gravity for the navigation can be defined.

Tap **ORIENTATION**:

1. Model is oriented with x axis up.
2. Model is oriented with x axis down.
3. Model is oriented with y axis up.
4. Model is oriented with y axis down.
5. Model is oriented with z axis up.
6. Model is oriented with z axis down.

In addition to **ORIENTATION**, a new navigation element is added in the right lower corner. Navigate through the architecture model with this instrument.

Zooming/translating/rotating with finger motions are enabled in this mode.



Tap ORTHOGONAL/ PERSPECTIVE:

1. The object is shown in orthogonal view.
2. The object is shown in perspective view.

Tap VIEW to select corresponding view direction:

1. Isometric.
2. Front.
3. Back.
4. Top.
5. Bottom.
6. Right.
7. Left.

Tap SHADING to show:

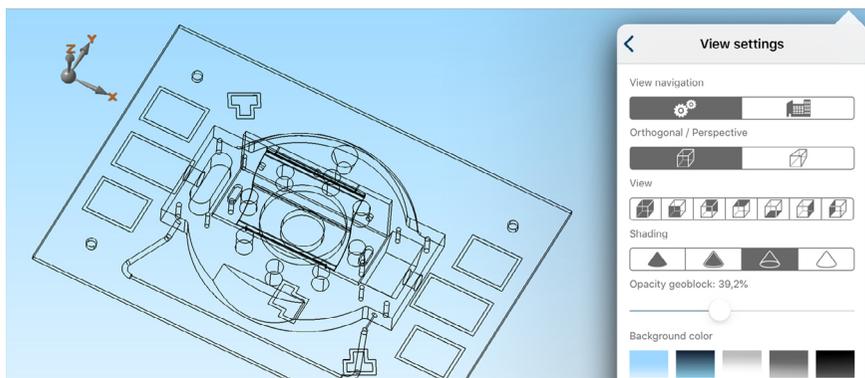
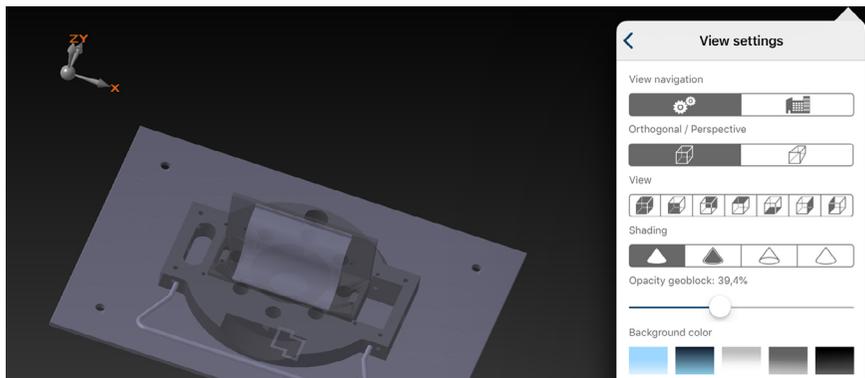
1. Only the faces of the 3D object.
2. Faces and edges of the 3D object.
3. Only the edges of the 3D object.
4. Only visible edges of the 3D object in green.

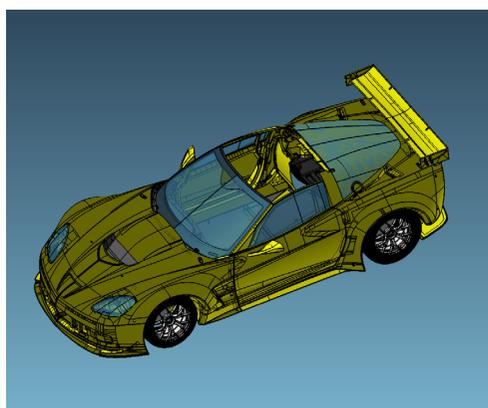
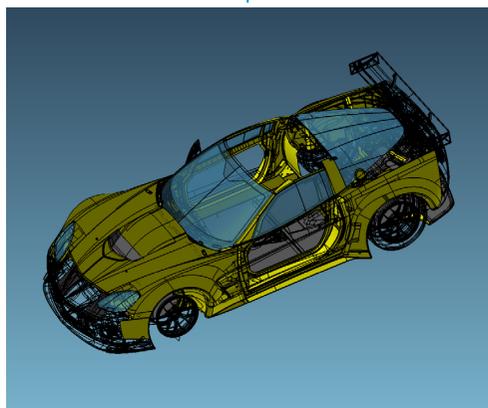
Moving the OPACITY GEOBLOCK slider:

The transparency value of the geoblock faces are changed. The **OPACITY GEOBLOCK** slider will be activated only for first and second **SHADING** types mentioned above.

Tap the BACKGROUND COLOR gradient tiles:

The five tiles show different color gradients. The gradient shown in the tile will be used as background for the 3D view. These gradients will only be used in the visible elements view. In the hidden elements view a light green gradient is always used.





Moving the BUFFER REFRESH RATE Slider:

For a large 3D model with a high amount of triangles, speed the handling by using this slider. While rotating, translating and zooming, some parts of the product structure will not be drawn so the action can be processed faster. Once finger movement is complete, the whole model will be shown.

The **BUFFER REFRESH RATE** value defines the amount of elements not to be drawn while manipulation. If the rate is **Low**, more elements will be hidden while manipulating the model and handling will be faster. The larger the model is, the more elements will be hidden with a **Low** rate. If the rate is **High**, nothing will be hidden while manipulating; the complete model will always be shown and handling might be slower for large models. You can select a value appropriate for the size of your model.

This slider is only active if your 3D model contains more than 500,000 triangles. If your model contains fewer triangles, the slider is deactivated and the model is shown completely while manipulating the view.

Depending on the **SHADING** settings, some of the faces might be fully hidden during manipulating but they will be shown as soon as manipulation is finished.