Welcome to the DigiPara® Liftdesigner Training

Basic Training

5/14/2019

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DigiPara® At-A-Glance

- Profile
  - Founded: 1989
  - Location: Cologne / Germany

- Products:
  - 1996 DigiPara® Liftdesigner
  - 2007 DigiPara® Escalatordesigner
  - 2011 DigiPara® Elevatorarchitect
    - for Autodesk Revit
  - 2012 DigiPara® Find (2012)
  - 2013 DigiPara® Liftdesigner
    - for Autodesk Inventor

DigiPara® At-A-Glance

- Worldwide operating enterprises
  - Overall more than 3000 licenses used worldwide
    - OTIS WHQ, Farmington, USA
    - Schindler WHQ, Ebikon, Switzerland
    - ThyssenKrupp, Neuhausen, Hamburg, Madrid
    - Kone WHQ, Finland, China
- SMB clients
  - More than 350 customers worldwide
    - Macpuarsa, Spain
    - Kleemann, Greece
    - Sematic, Italy
    - …

DigiPara® At-A-Glance

- My Background
  - Alexandra Göttert
  - Start 02/14 in Elevator/Software Business

- At DigiPara
  - Technical Support
  - Training
  - Project Work
  - Template and Content Customization
  - BIM Model Product Loading

Agenda Content Session 1

- Program Basics
  - User Interface
  - Shaft Wizard
  - Main Project Data
  - Floor Levels
  - Control Elements
  - Docking Windows
  - View Frames & Section Plane
  - Sheets & Sheet Templates
  - BIM Components & Product Options
  - Dimensions & Annotations
  - Special View Types
- Level of Development - LOD
  - General
  - Individual Settings
- 2D Drawing Export
  - General
  - PDF & DWG
- Dimensions (Layout)
  - General
  - Properties
  - Dynamic Dimensions

Agenda Content Session 2

- Practical Examples
  - General
    - Rail Bracket, Entrance Pocket, Sill Options, Car Balustrade & Platforms
  - Traction Elevators
    - Counterweight, Pulley Beam, Gear Base Construction & Car Frame
  - Hydraulic Elevators
    - Cylinder, Rail Bracket & MRL
- Overwrites
  - General
  - Dimension Overwrites
  - Component Overwrites
  - Annotation Overwrites
  - The *Operator
  - Extended *Operator & Combinations
- Shaft Groups
  - Copy and add Shafts
  - Group Shaft Wall Opening
  - Machine Room
- Project References & External Blocks
  - Data Tree & Project References
  - External Blocks (AutoCAD DWG‘s)
  - Export Project Values (*.rtf, *.xls, *.html)

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Agenda Content Session 3

- Material Configuration
  - Shaft Walls
  - Machine Room Walls
  - Pit & Ceilings
  - Floor Levels
  - Preferences / Material Hatching
- 3D Data Exchange
  - General
  - IFC & STEP
    - Coordinate System (IFC)
  - 3D LDBIM Export (LdBIM)
- Additional Objects
  - Additional Child Objects
    - User Component
  - Additional Wall Openings
  - Additional Wall Segments
- Cabin Configurator
  - Cabin Design

Agenda Content Session 4

- Practice - Custom Sheet Template
  - Develop own title block & drawing border
  - Create and store own view frames
  - Save costum sheet templates under LOD consideration
- Übung – Additional Objects
  - Develop a steel shaft according to training materials
- FAQ‘s
  - Discussion of open questions

Program Basics

User Interface

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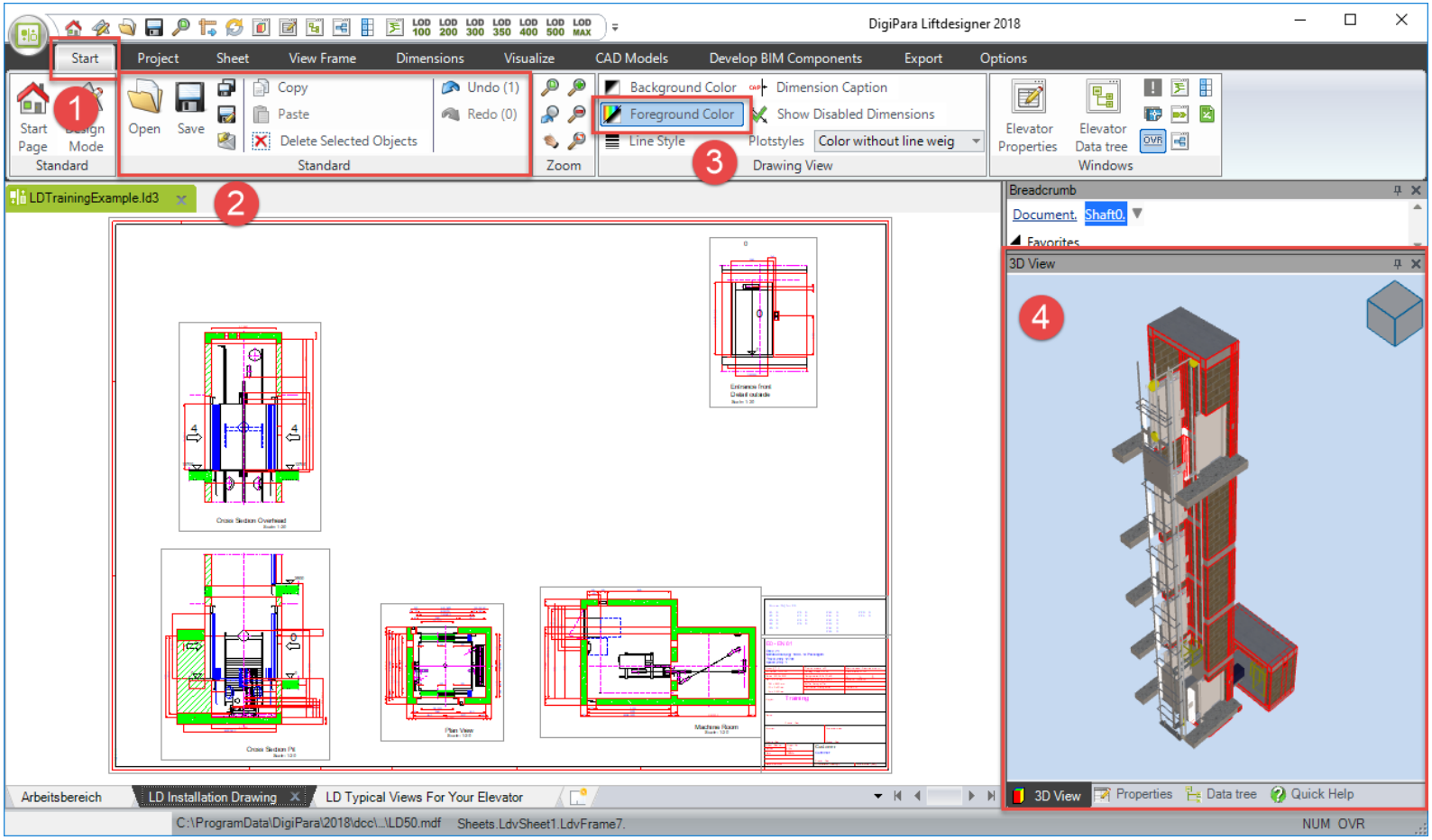
DigiPara Liftdesigner UI

1 Ribbon tabs

2 Ribbon groups

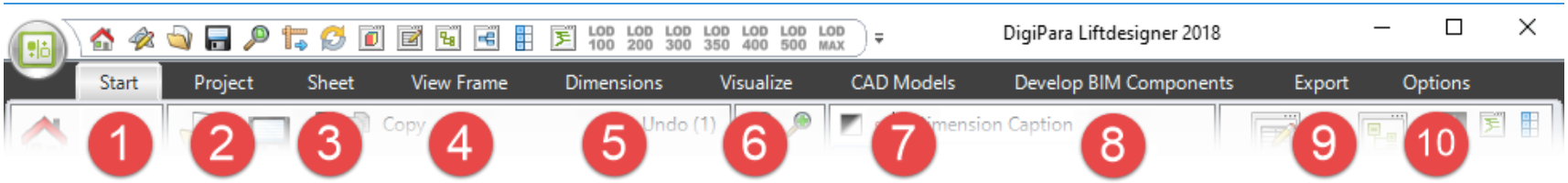
3 Ribbon items

4 Docking windows



DigiPara Liftdesigner UI - Ribbon Tabs

- Provide elevator, project, layout and program specific options



01. File, zoom and window operations

02. Project, shaft groups, main project data, cabin configurator, calculation, object selection, selection mode

03. Sheet, sheet template, view frame template and sheet overlay operations, language operations

04. View frame, type, view direction, component visibility, selection operations, LOD settings

05. Dimension, dimension setting and dynamic dimension operations

06. 3D window operations, visualisation, display options, render, image export

07. Add CAD model, orientation settings, CAD automation, performance

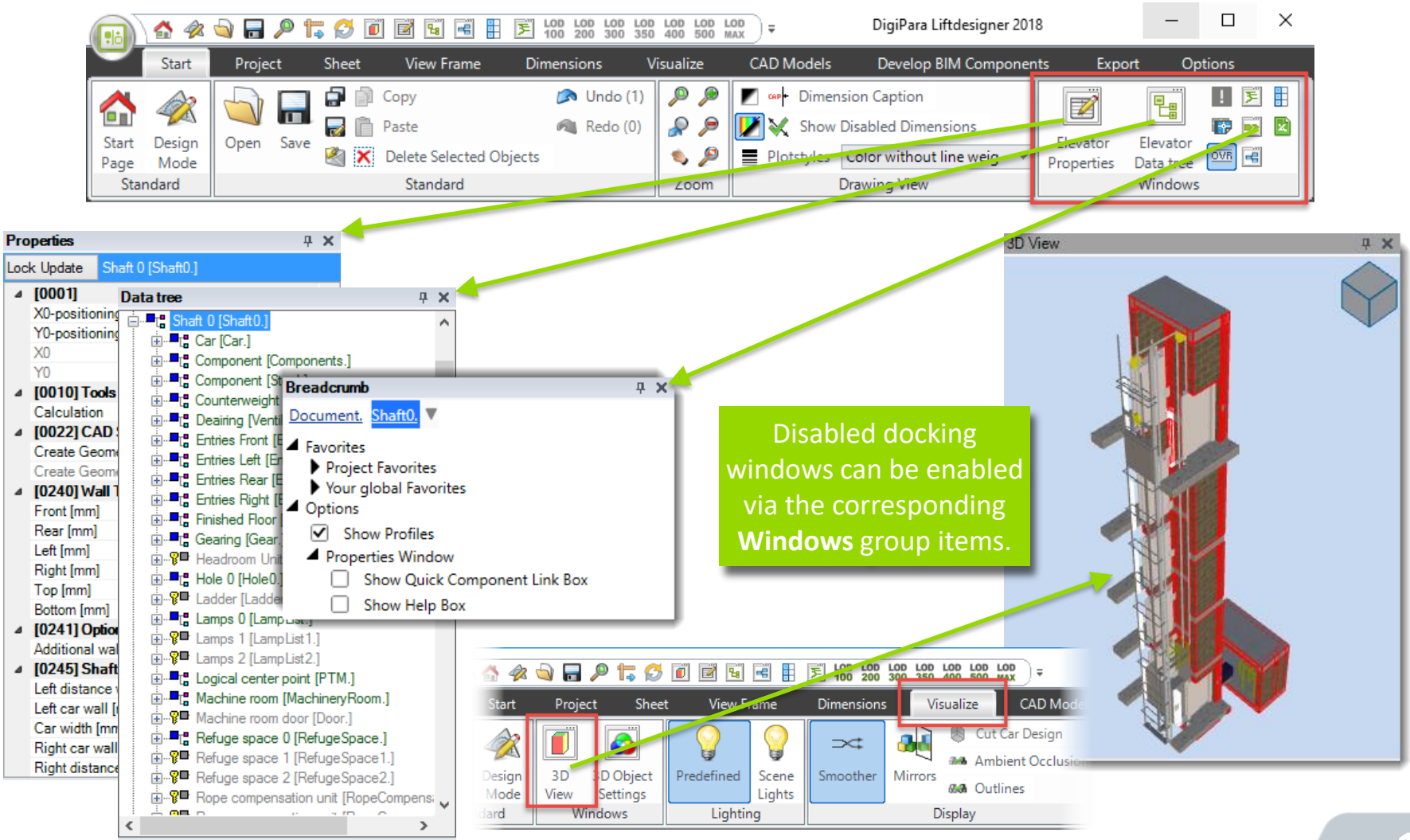
08. Develop BIM components, develop geometry, orientation, characteristic points, BIM component rules, DigiPara BIM library, Macro and VBA operations

09. Data export, 2D drawing export, 3D view frame export and BIM exchange operations

10. Software activation, DigiPara online and help operations

DigiPara Liftdesigner UI - Docking Windows

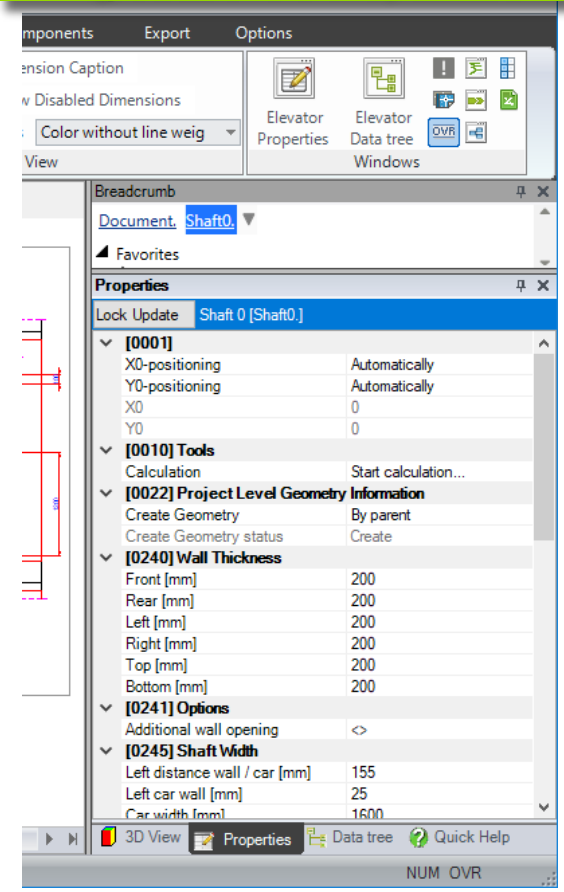
- Properties, Data tree, 3D View, Breadcrumb

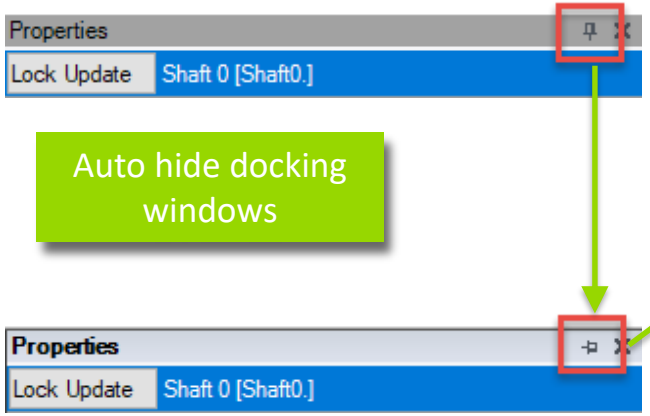


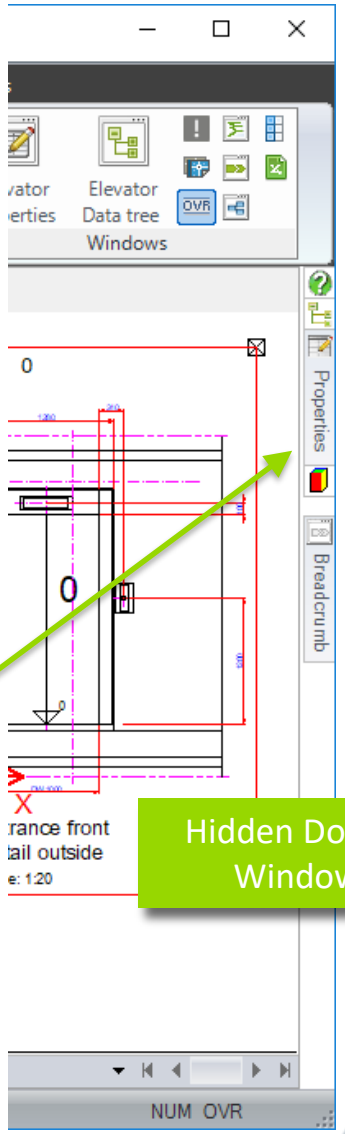
DigiPara Liftdesigner UI - Docking Windows

- Display Option

Docking windows are docked on the right side of the UI by default.



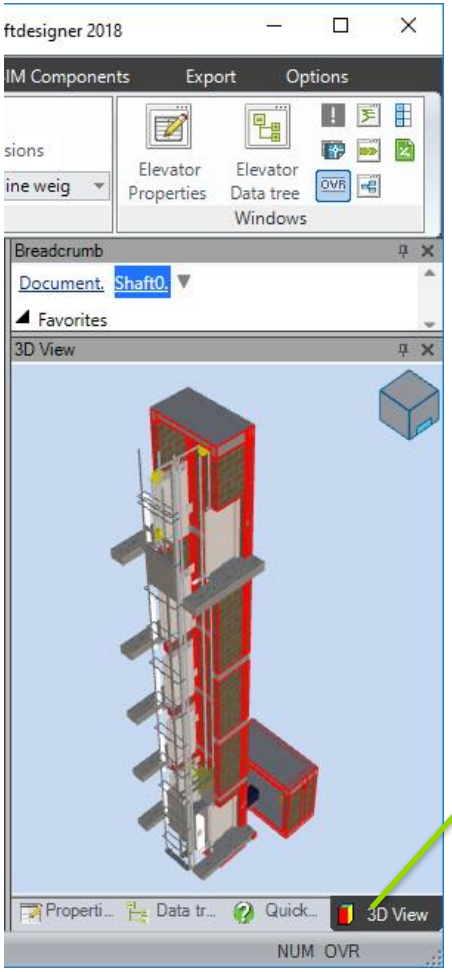




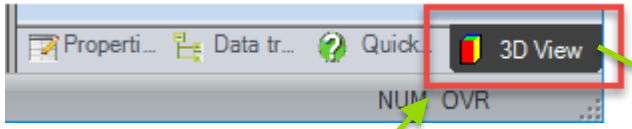
Hidden Docking Windows

DigiPara Liftdesigner UI - Docking Windows

- Docking Options

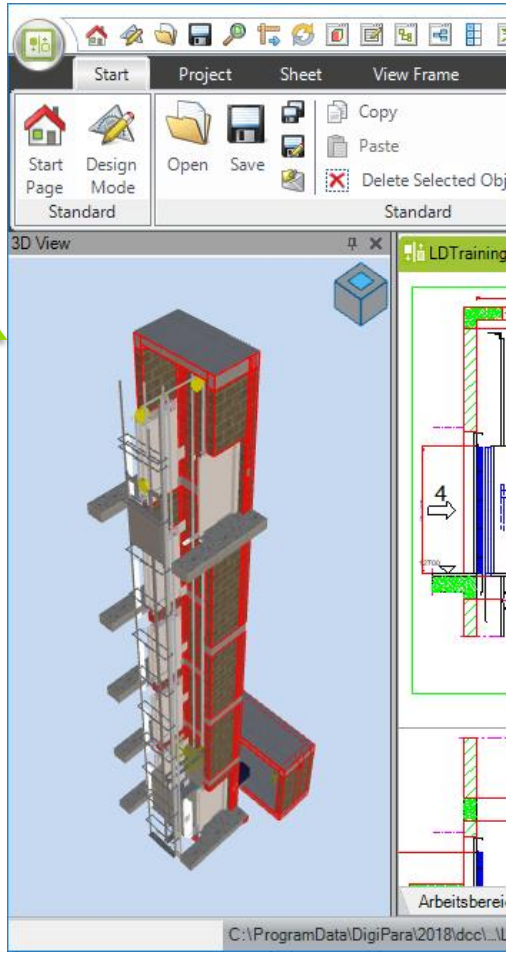


Changing the docking window location



Via the window tab (by clicking and holding the left mouse button).

Single window docked on the left side of the UI.



Program Basics

Shaft Wizard & Main Project Data

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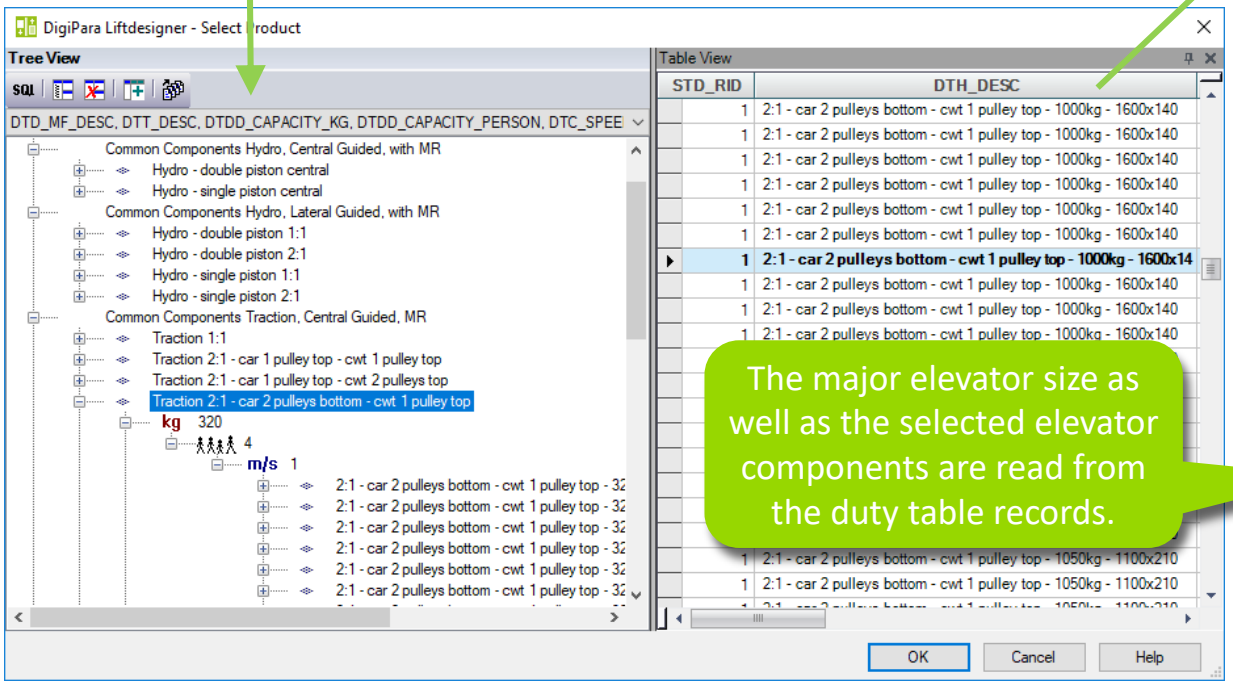
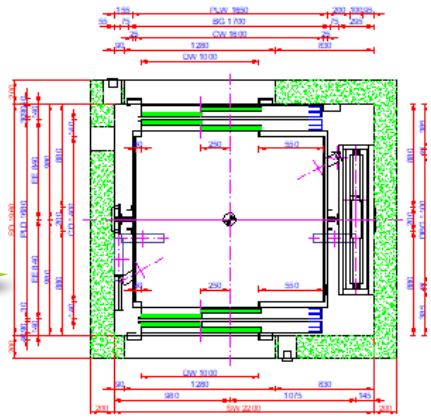
Program Basics - Shaft Wizard

The standard elevator arrangements provided by the shaft wizard are stored in duty tables in the DigiPara Liftdesigner geometry BIM data base.



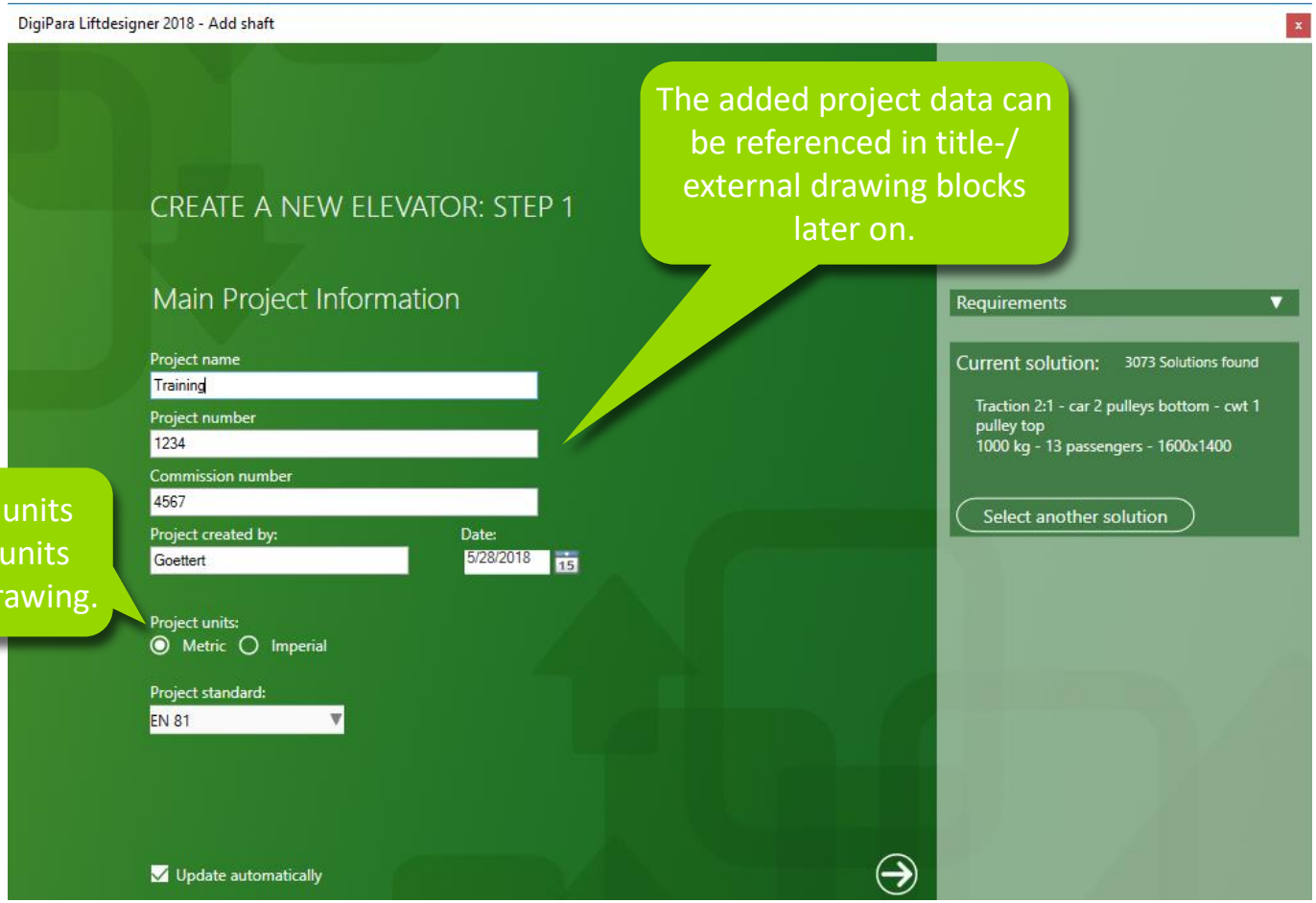
The major elevator size as well as the selected elevator components are read from the duty table records.



Plan View
Scale: 1:20

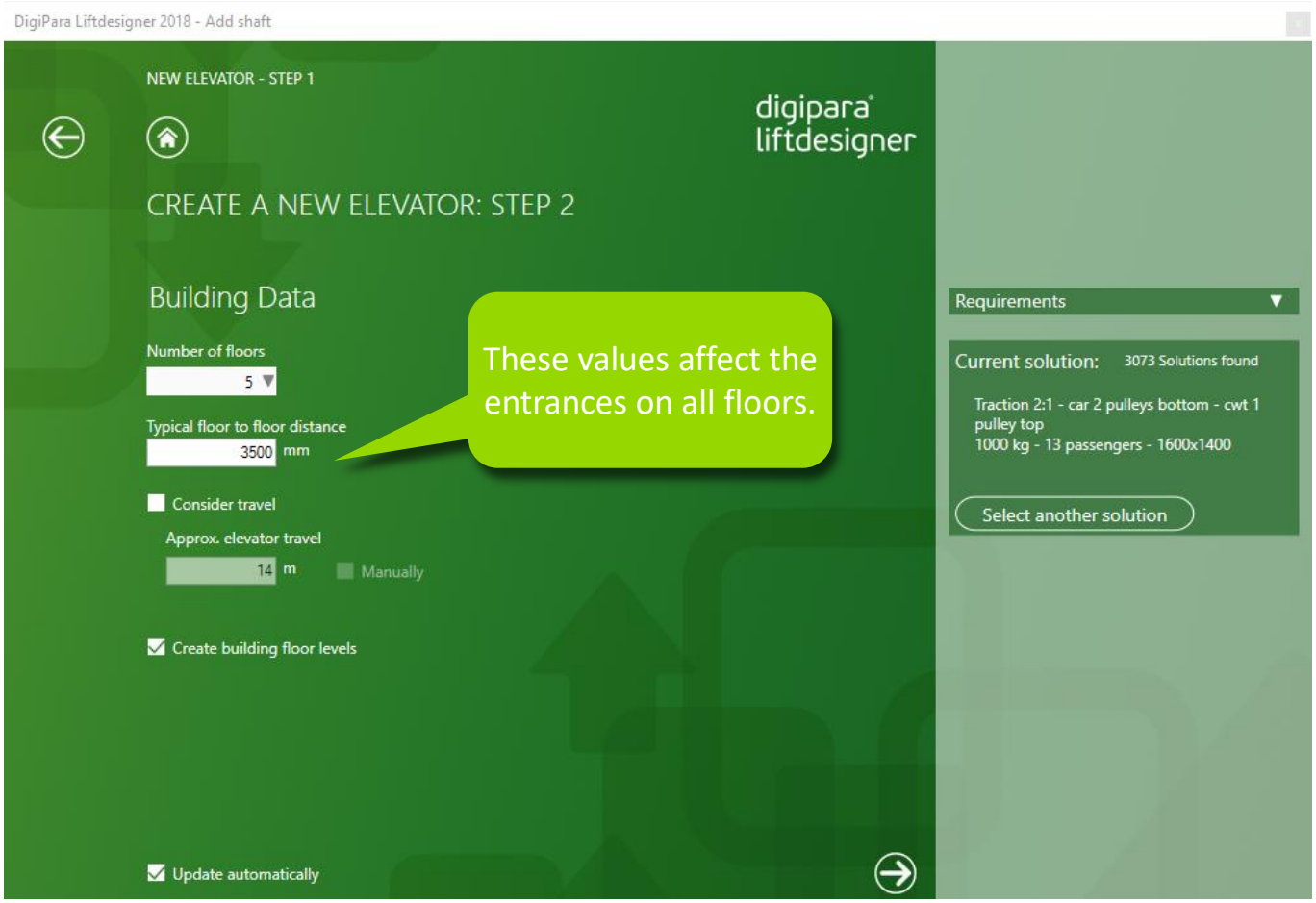
Shaft Wizard - Step 1

- Project / Elevator Data
  - Provide project specific information



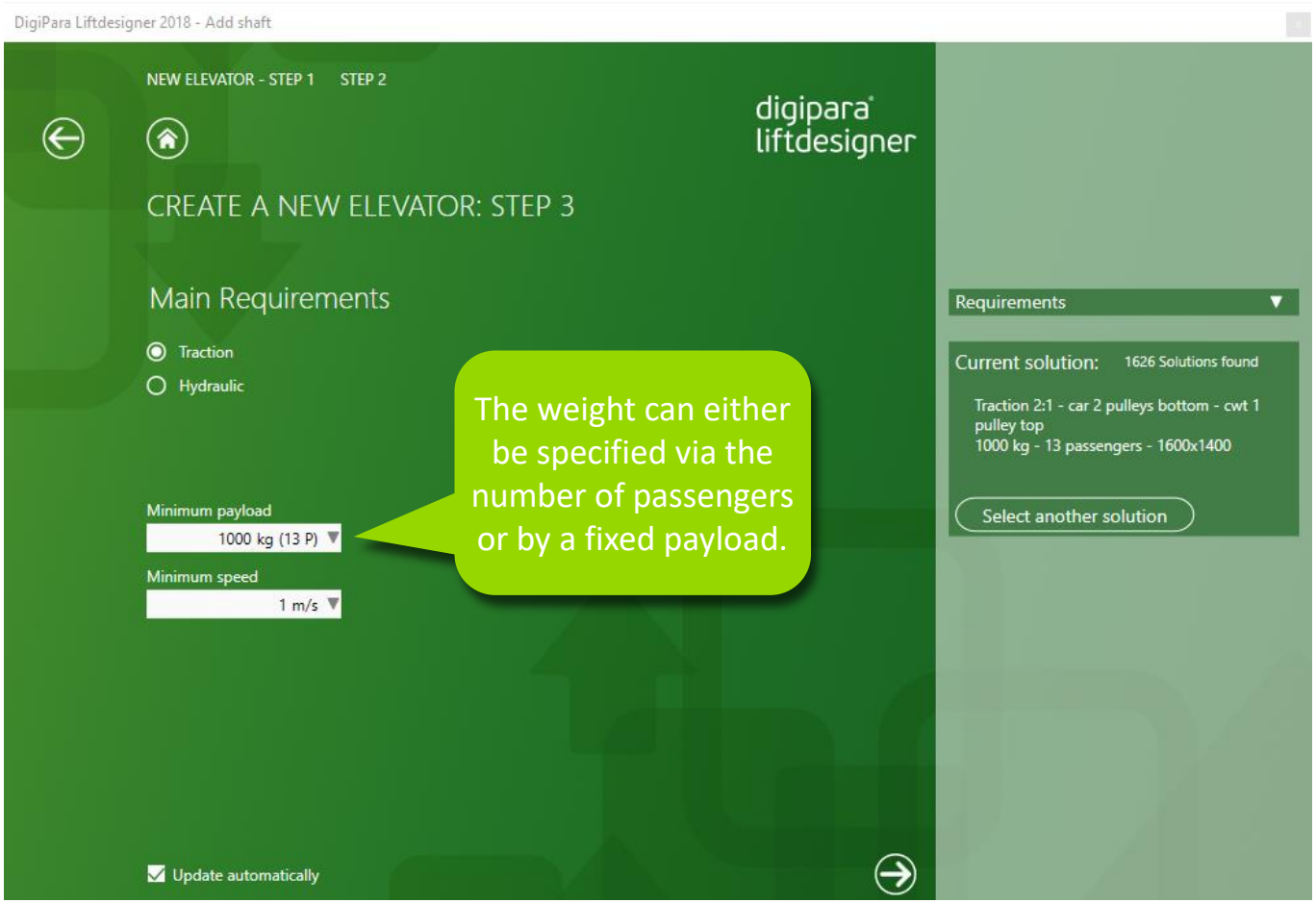
Shaft Wizard - Step 2

- Building Data
  - Number of floors / Floor to floor distance



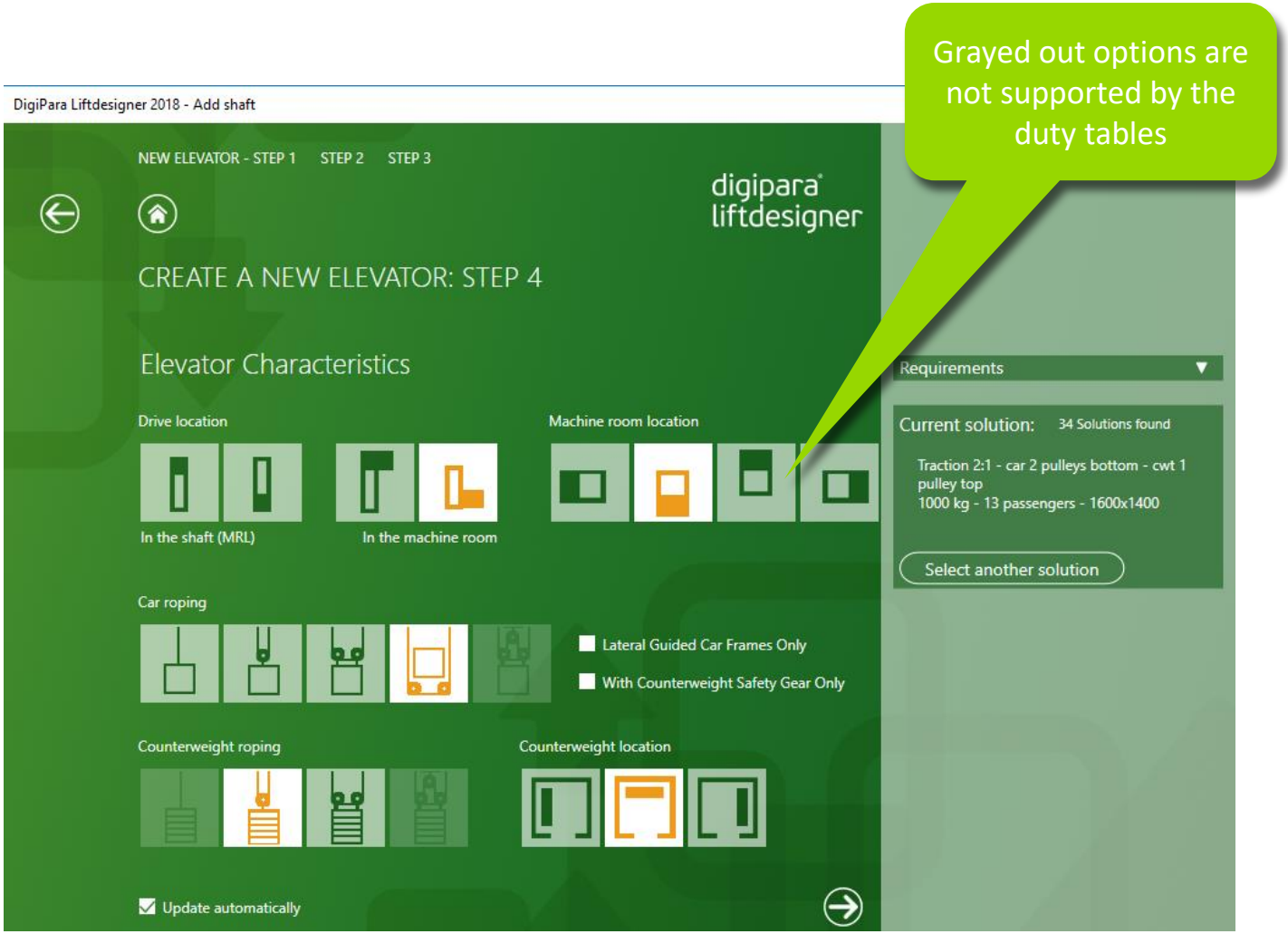
Shaft Wizard - Step 3

- Main Requirements
  - Specifying the general elevator type



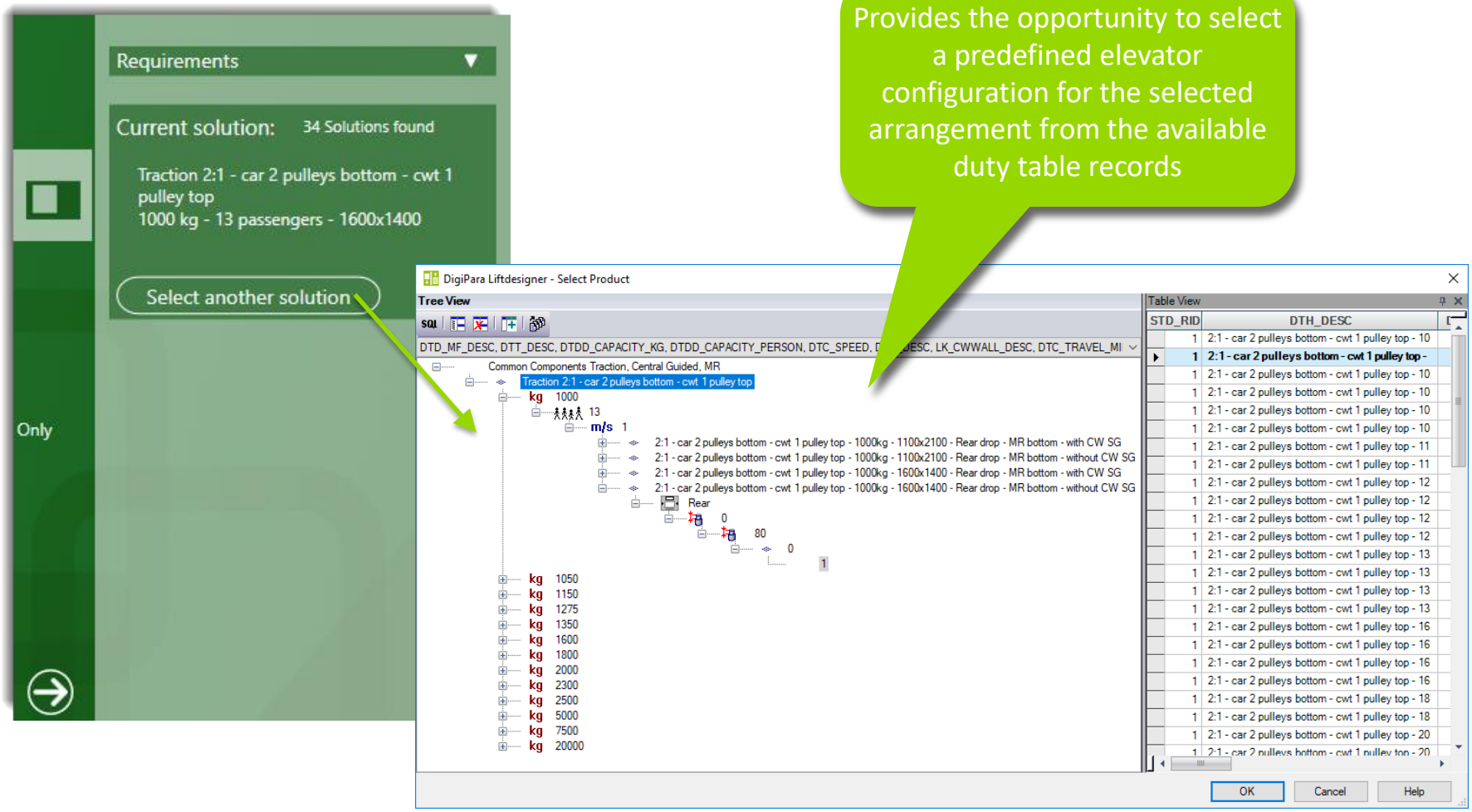
Shaft Wizard - Step 4

- Elevator Characteristics



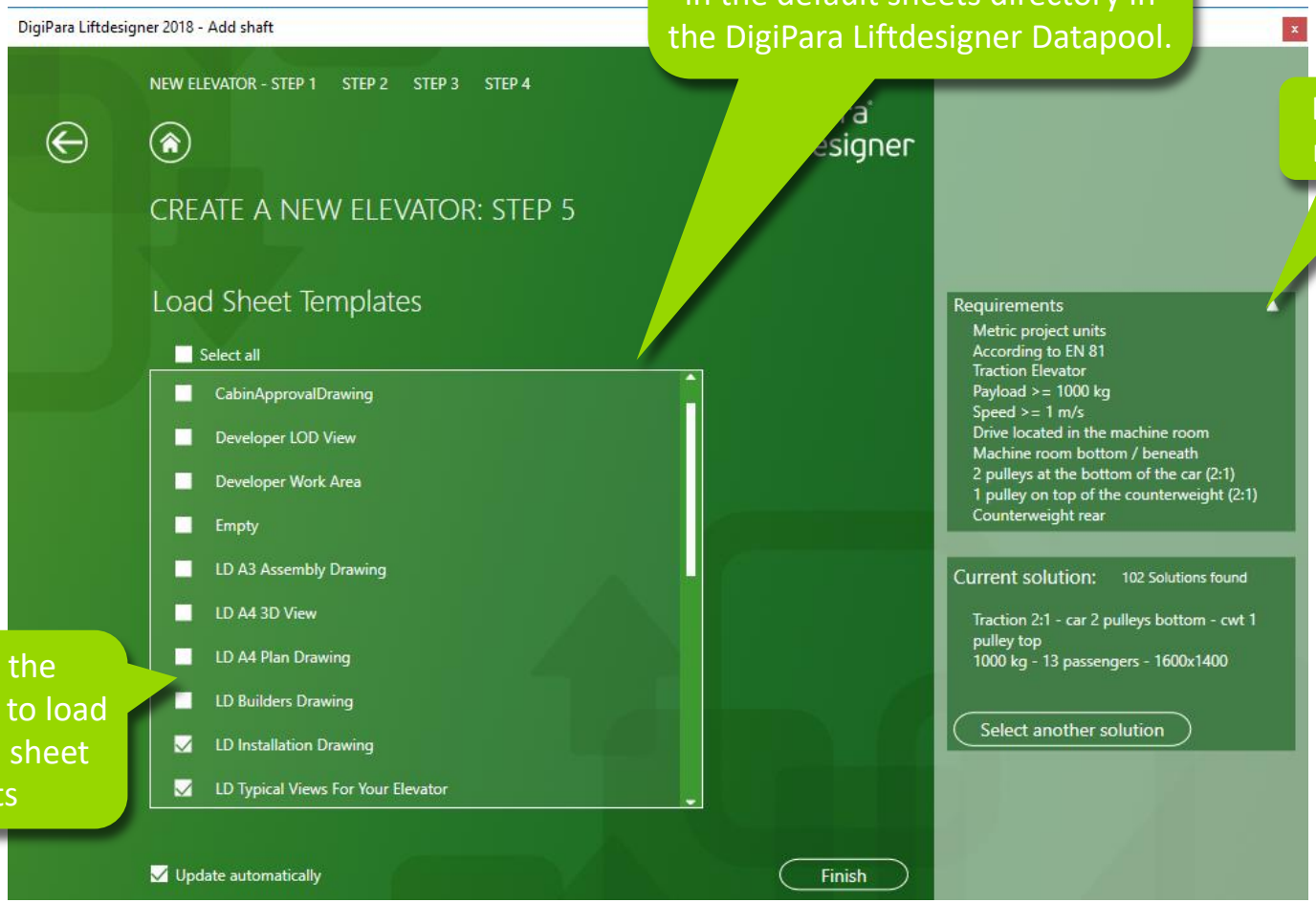
Shaft Wizard

- Select another solution



Shaft Wizard - Step 5

- Load Sheet Templates



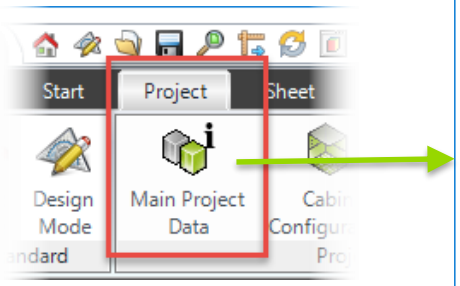
The sheet template list can be supplemented with your own templates as well by storing them in the default sheets directory in the DigiPara Liftdesigner Datapool.

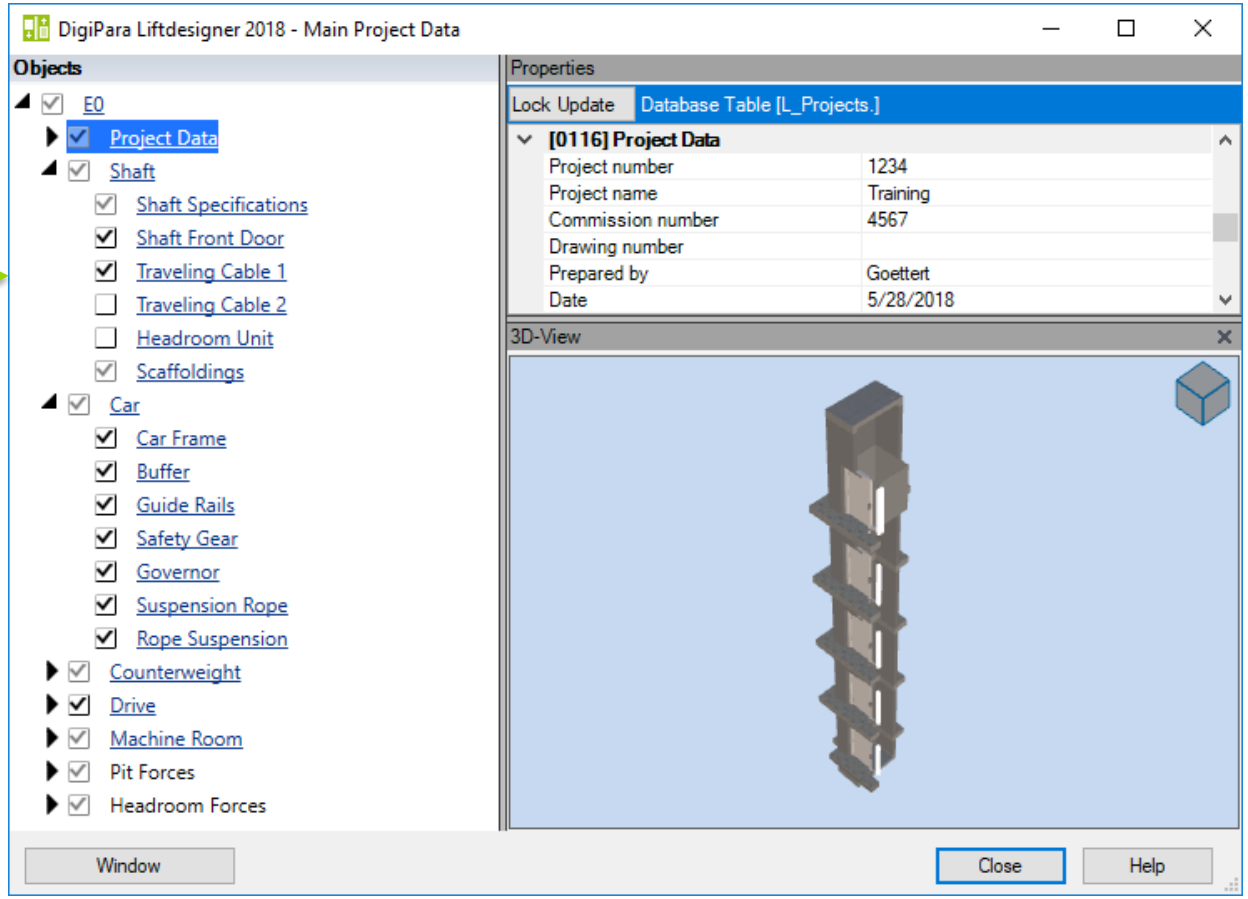
List of project requirements

Provides the opportunity to load predefined sheet layouts

Program Basics - Main Project Data (MPD)

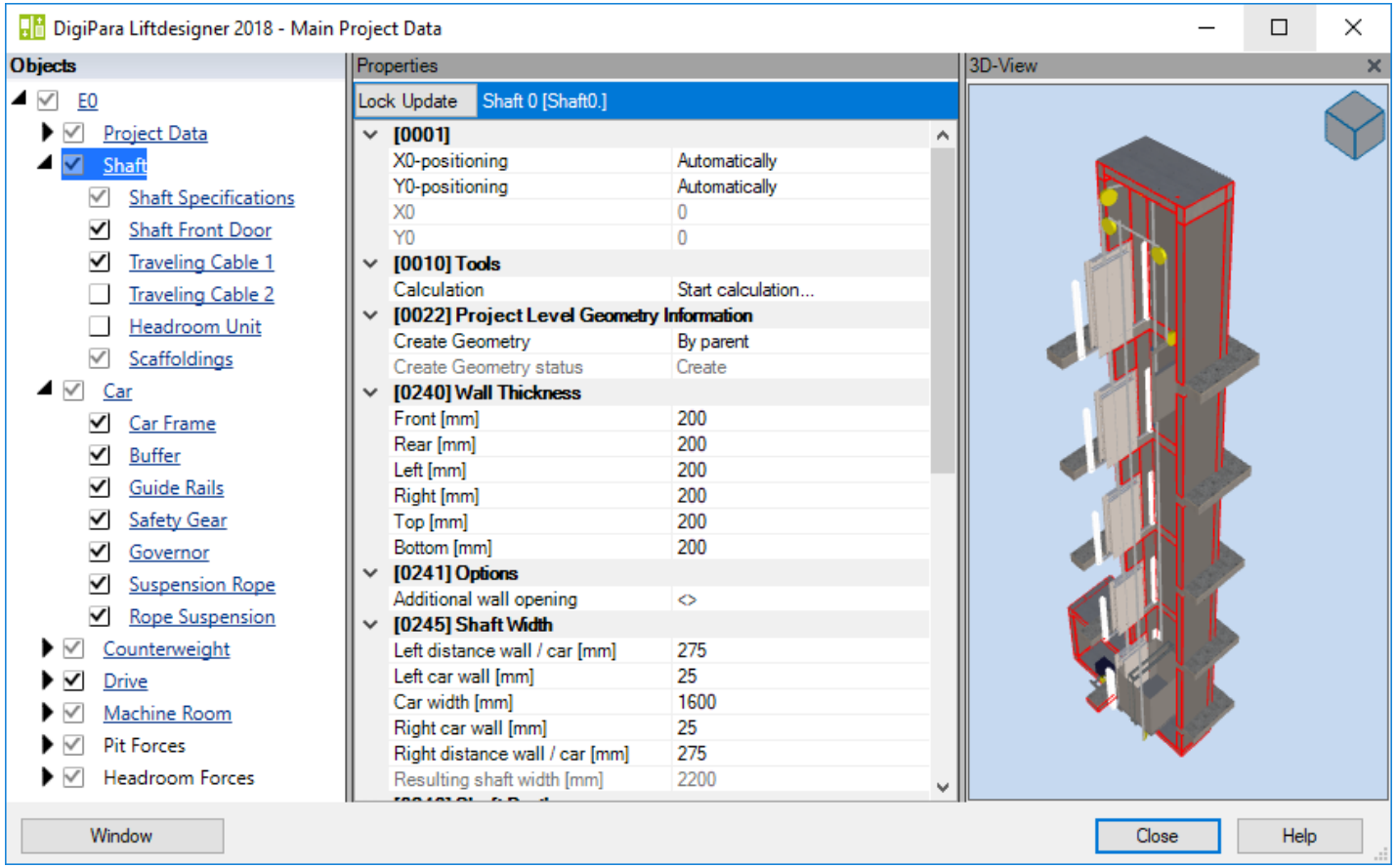
- Combines the properties of the major elevator components
  - Can be displayed via Project Tab → Project Group





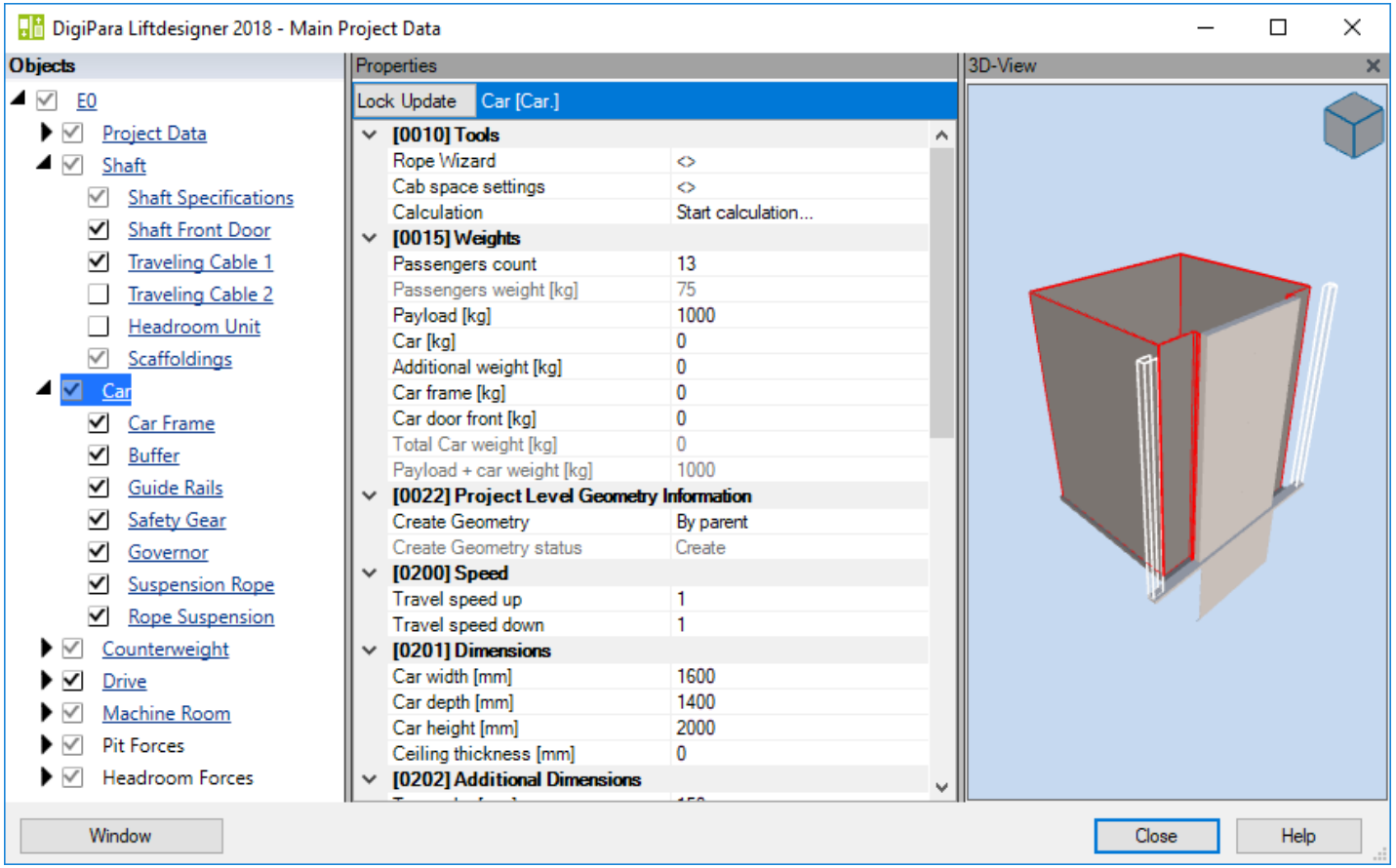
Program Basics - MPD

- Shaft
  - Provides the opportunity to customize the shaft and shaft-related component parameter



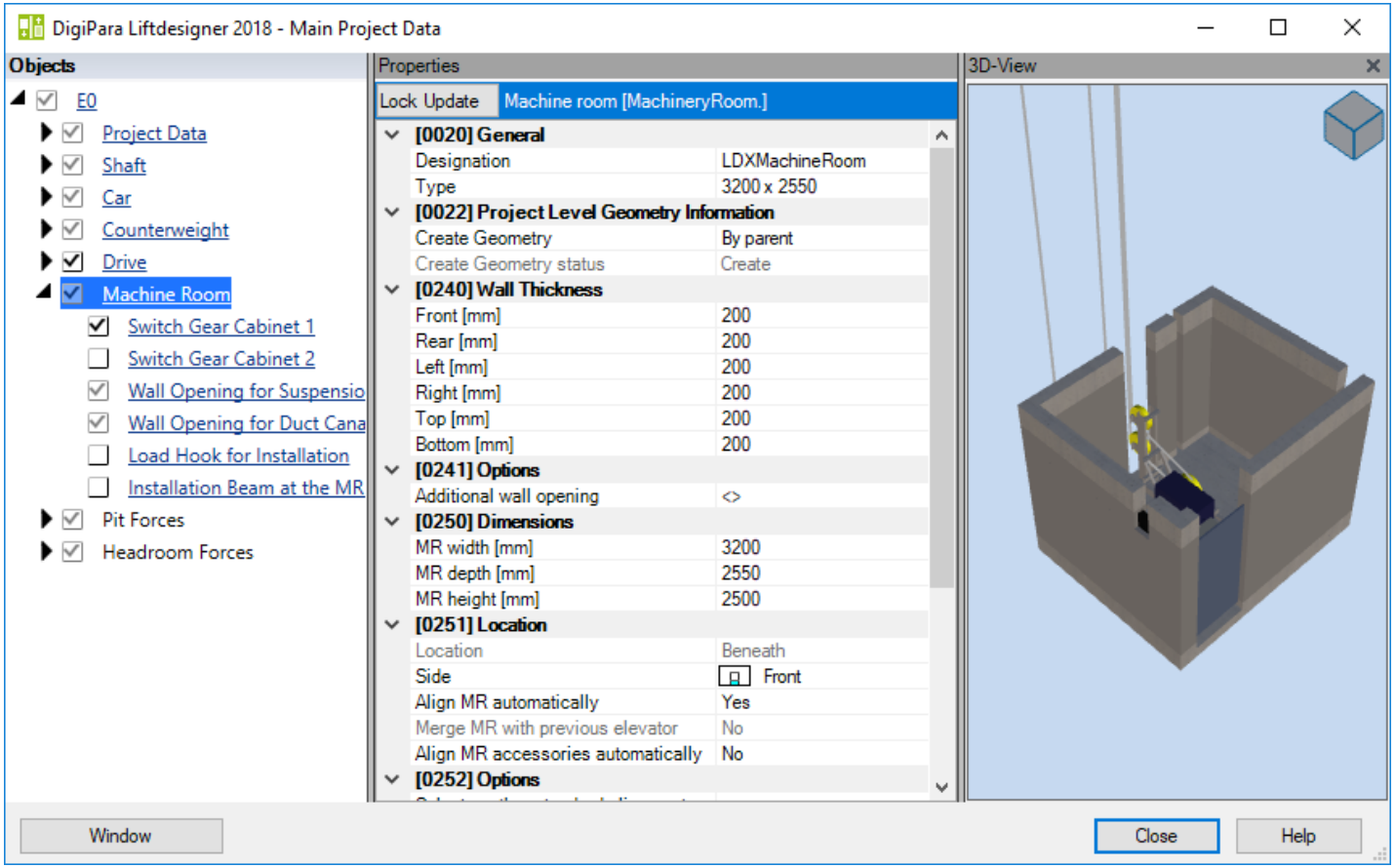
Program Basics - MPD

- Car
  - Provides the opportunity to customize the car and car-related component parameters



Program Basics - MPD

- Machine Room
  - Provides the opportunity to customize machine room and machine room-related component parameters



Program Basics

Floor Levels

YouTube: Adding and removing floor levels

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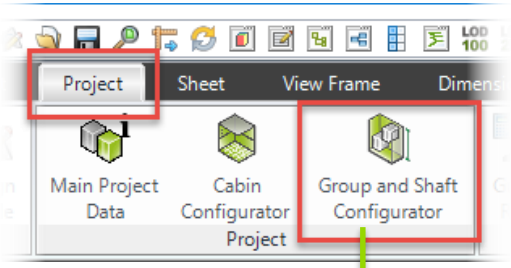
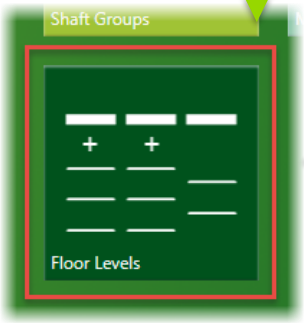
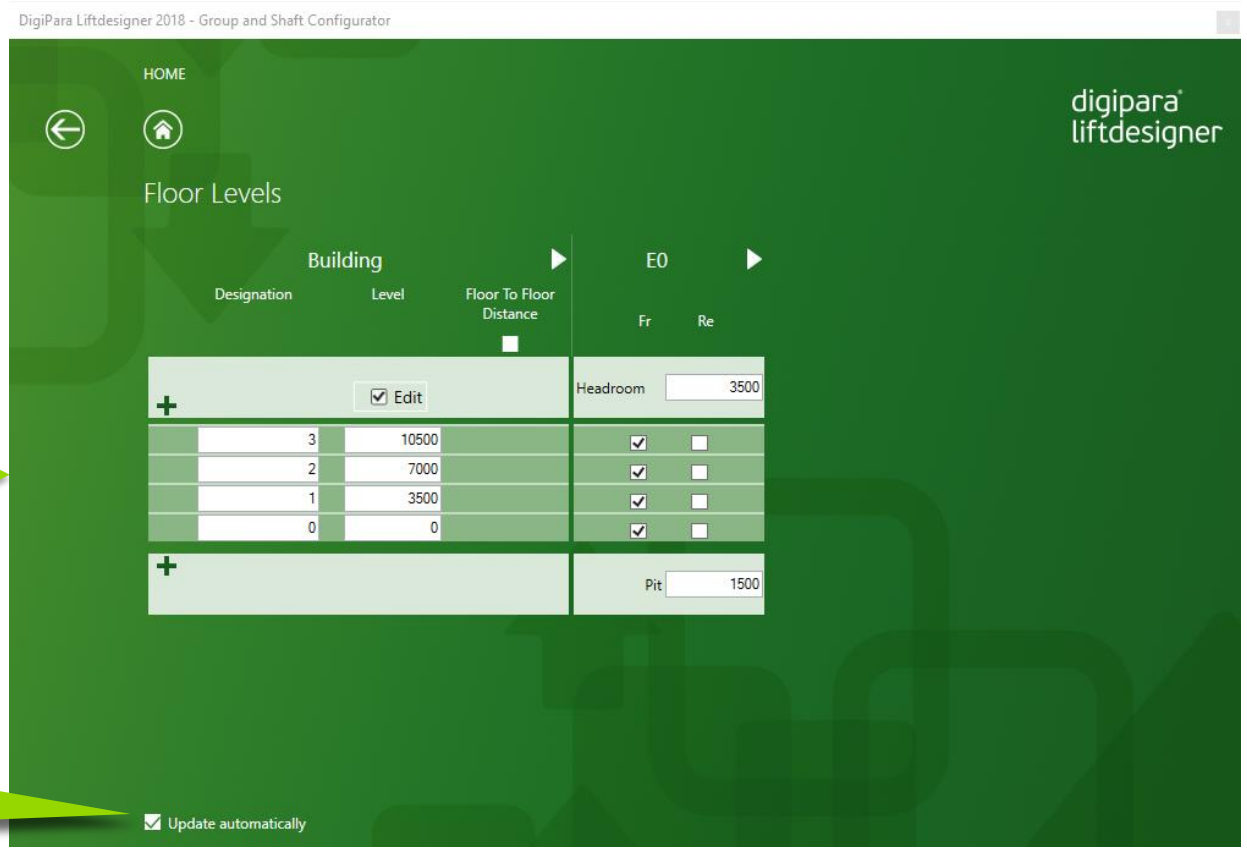
Program Basics – Floor Levels

- Activation via the Group and Shaft Configurator



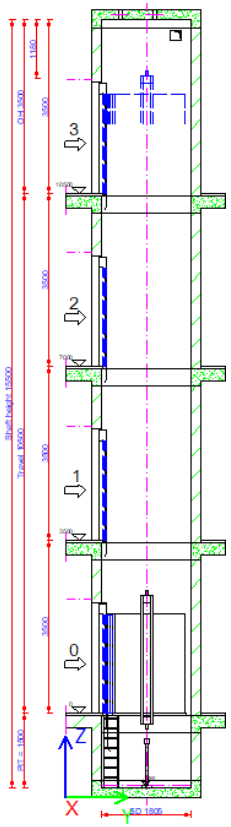


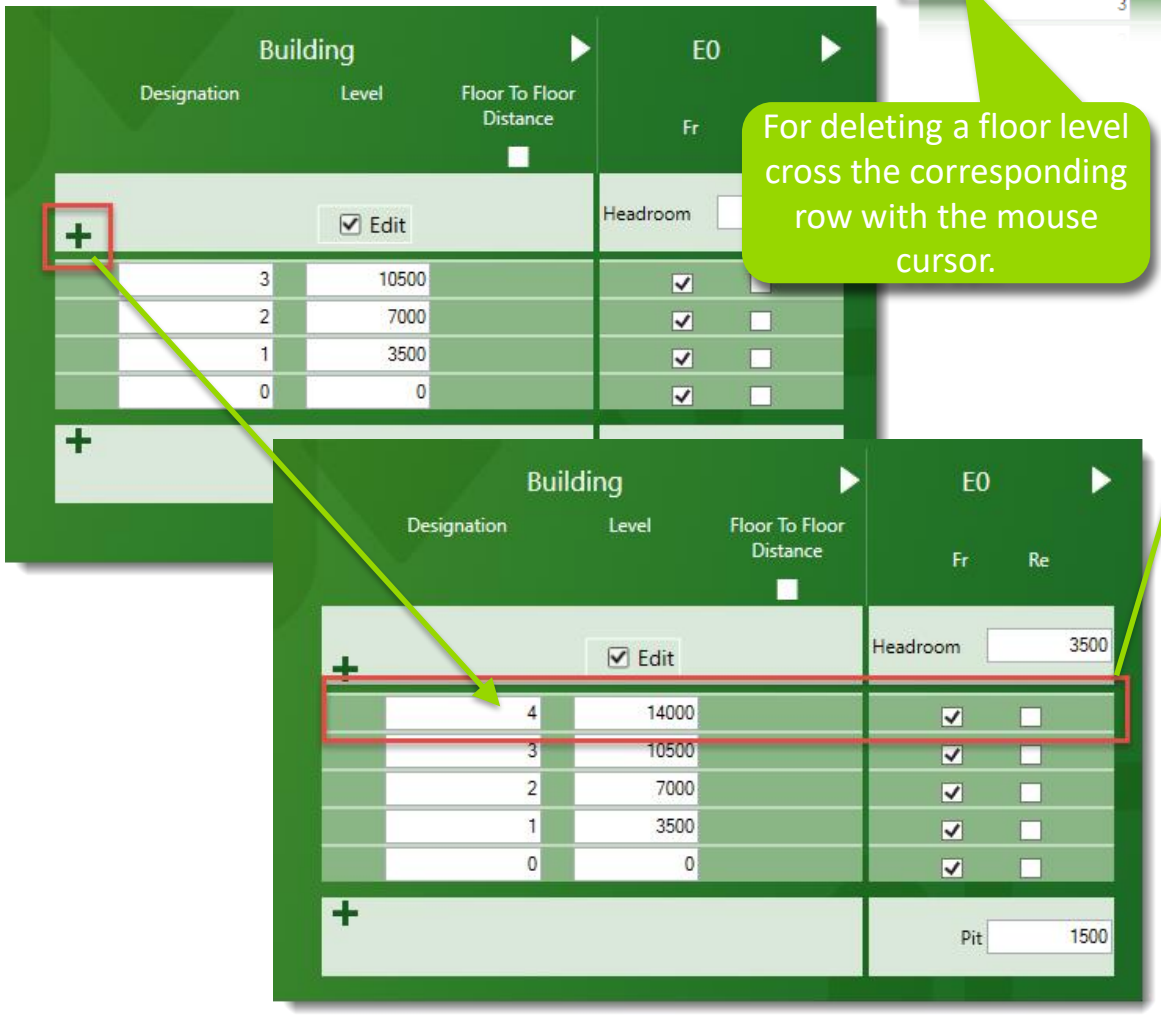


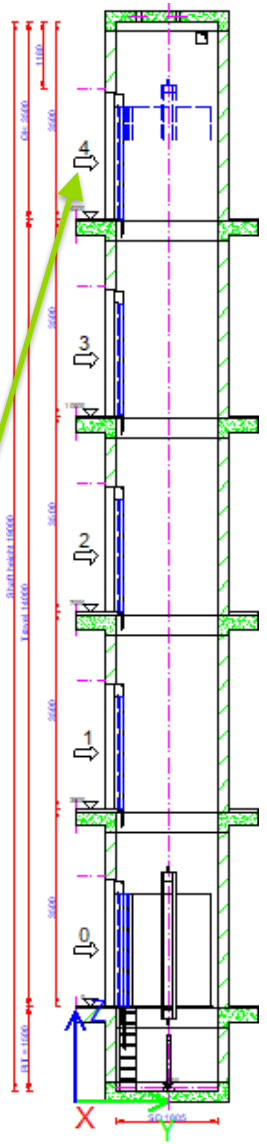
The current project is automatically loaded in the background.

Program Basics – Floor Levels

- Increase the number of floors

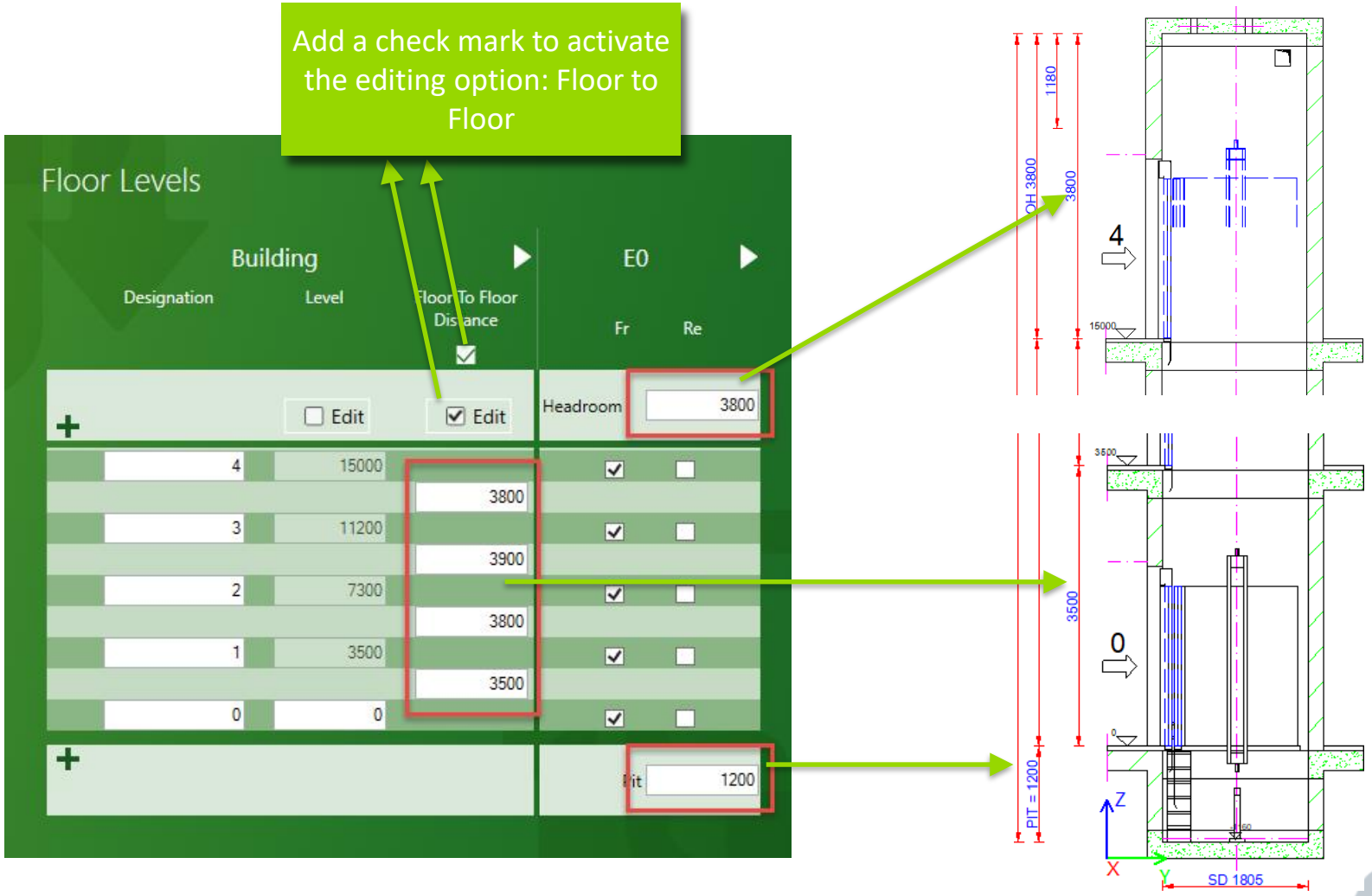






Program Basics – Floor Levels

- Customizing the Floor to Floor Distance, Headroom and Pit



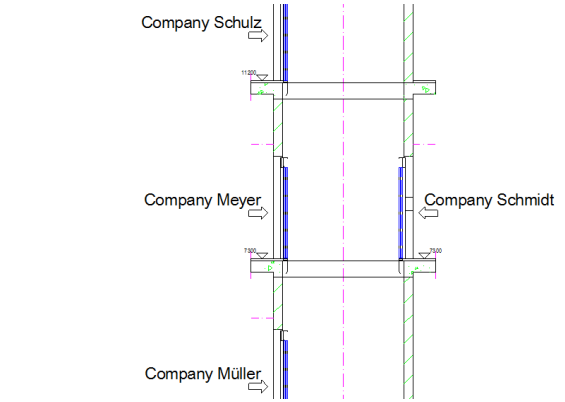
Program Basics – Floor Levels

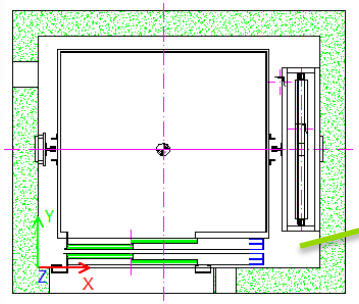
- Determine Entrances & Designations

Shows the editing option

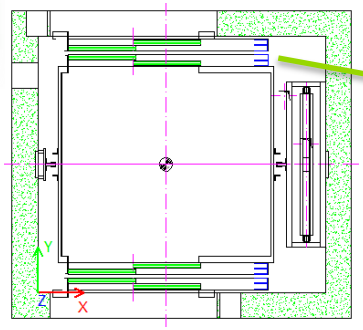
Building

Designation	Level	Floor To Floor Distance	Designation Rear (if deviating)
		☑	
		☐ Edit	☑ Edit
Company Muster	15000		
		3800	
Company Schulz	11200		
		3900	
Company Meyer	7300		Company Schmidt
		3800	
Company Müller	3500		
		3500	
0	0		





	☐ Edit	☑ Edit	Headroom	3800
4	15000			
		3800		
3	11200			
		3900		
2	7300			
		3800		
1	3500			
		3500		
0	0			
			Pit	1200



	☐ Edit	☑ Edit	Headroom	3800
4	15000			
		3800		
3	11200			
		3900		
2	7300			
		3800		
1	3500			
		3500		
0	0			
			Pit	1200

Practice - Shaft Wizard, Floor Levels & MPD

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- Create an elevator with the following specifications:
  - Consider travel - no
  - Create building floor levels - no
  - 5 Floors
    - Typical floor to floor distance 3000
  - Traction elevator 2:1
    - 13 persons / 1000 kg, 1 m/s
    - with CW safety gear
  - Machine room
    - Below / left
  - Car roping
    - 2 pulleys below
  - CW roping right
    - 1 pulley top
  - Car size 1600 mm x 1400 mm

Practice - Shaft Wizard, Floor Levels & MPD

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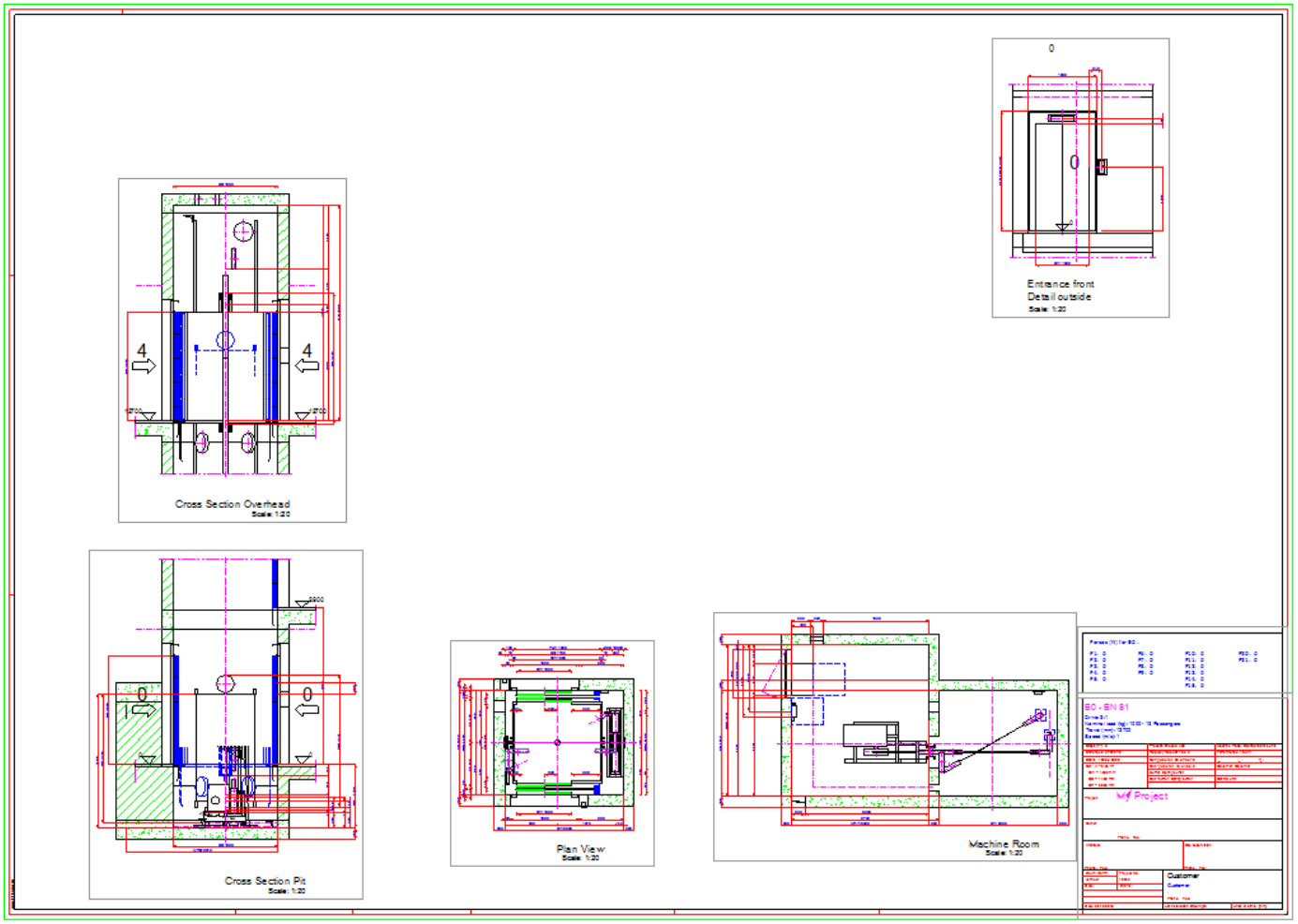
- Sheet Templates:
  - LD Installation Drawing
  - LD Typical Views For Your Elevator
- Entrances
  - Front: all floors
  - Rear: first and last level
- Individual Floor to Floor Distance:
  - Pit: 1200 mm
  - E1: 2900 mm
  - E2: 3000 mm
  - E3: 3000 mm
  - E4: 3800 mm
- Save the project under the following file name:
  - LDTrainingSample.ld3

Practice - Shaft Wizard, Floor Levels & MPD

- The result should look as shown below:



Program Basics

Controls & Docking Windows

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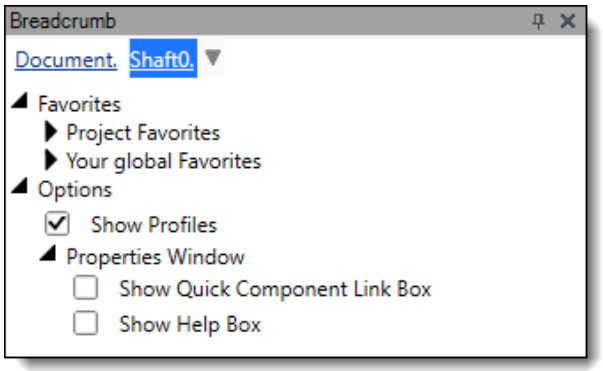
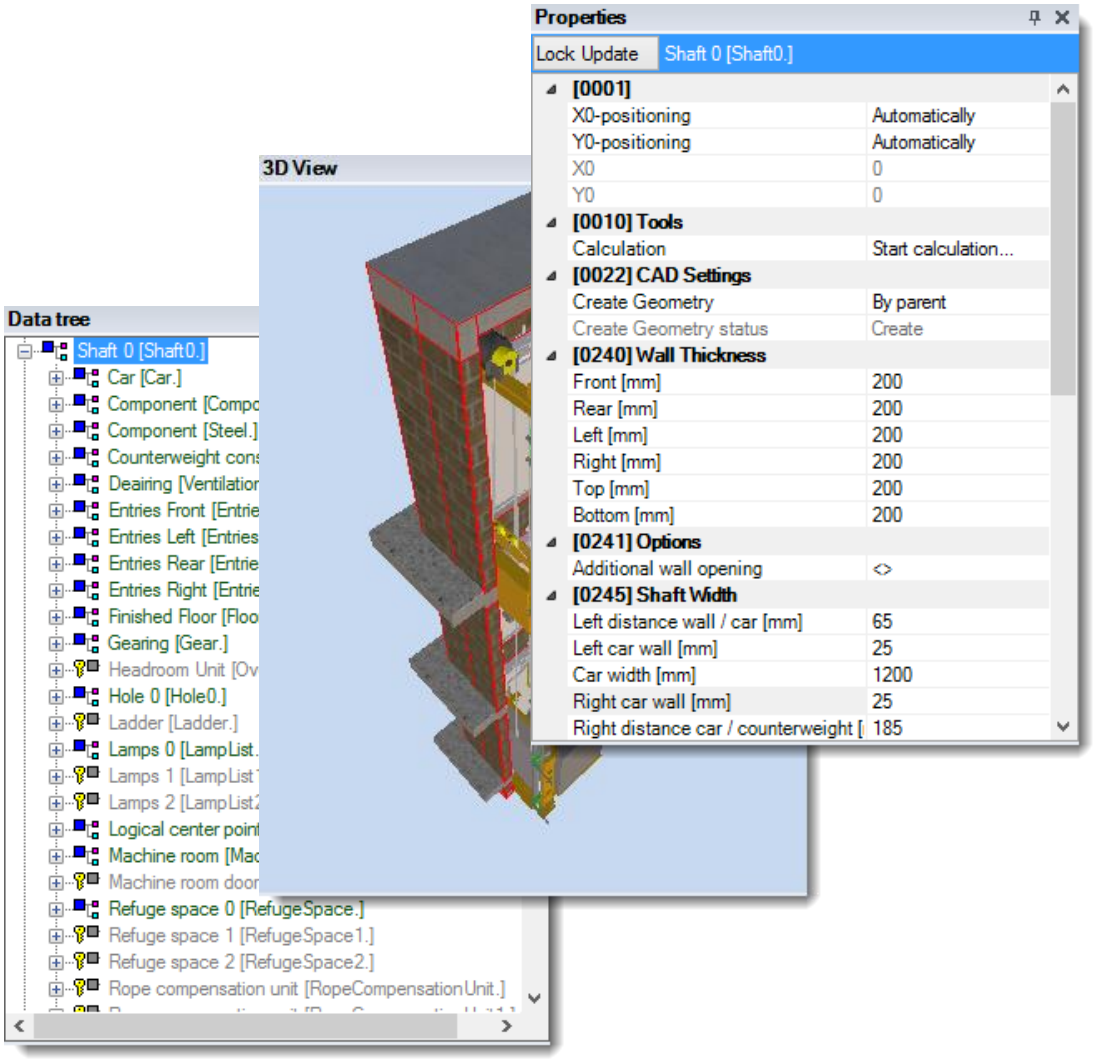
Docking Windows & Controls

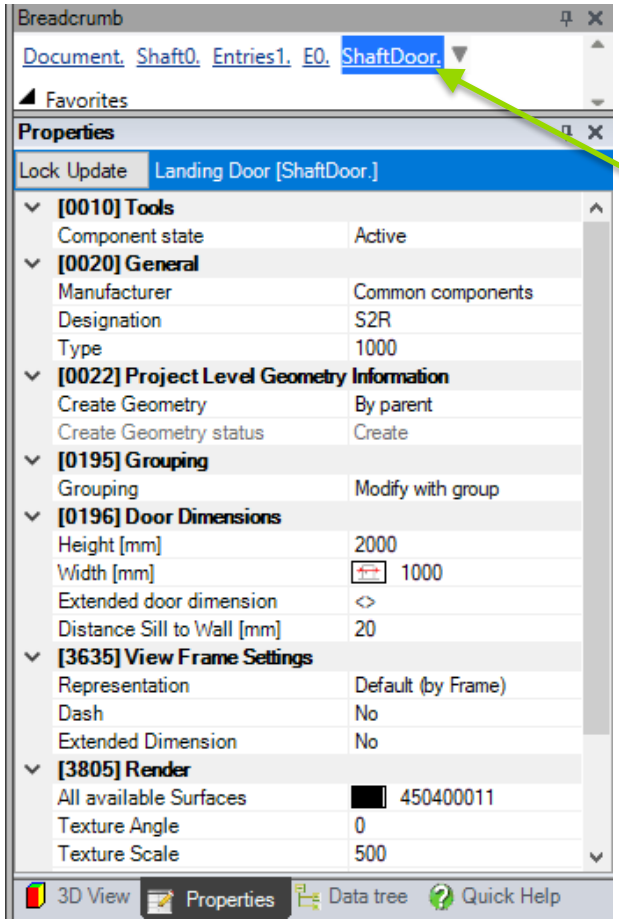
- Data tree
- Properties
- 3D View
- Breadcrumb

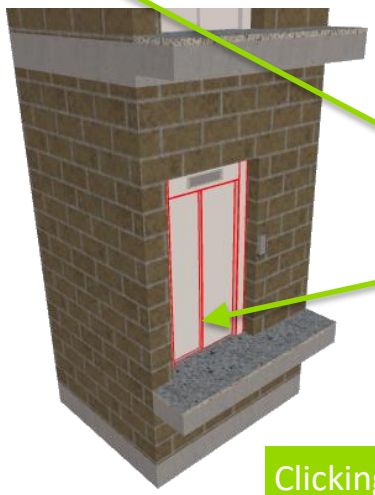


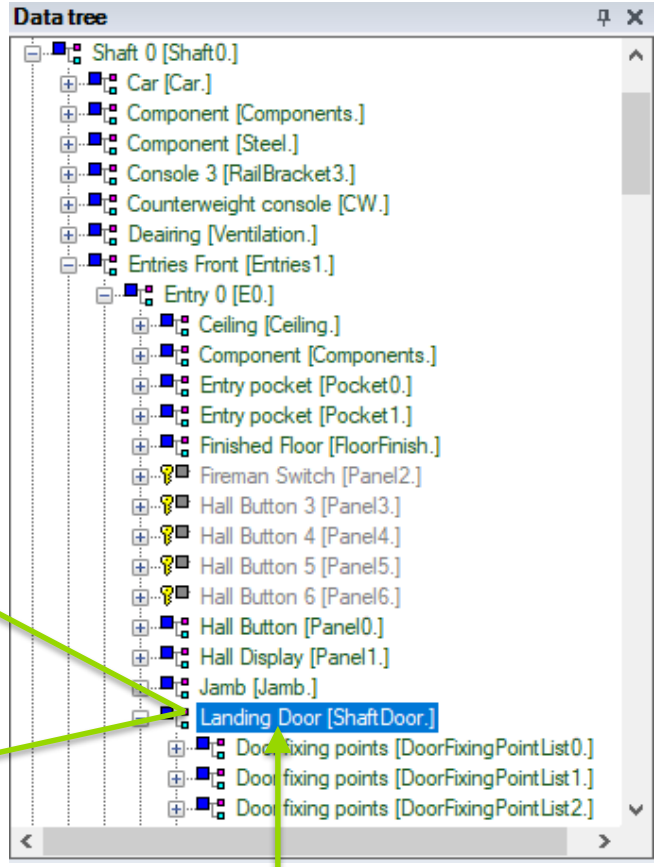


Program Basics – Data tree

- Represents the elevator project in hierarchical text tree structure



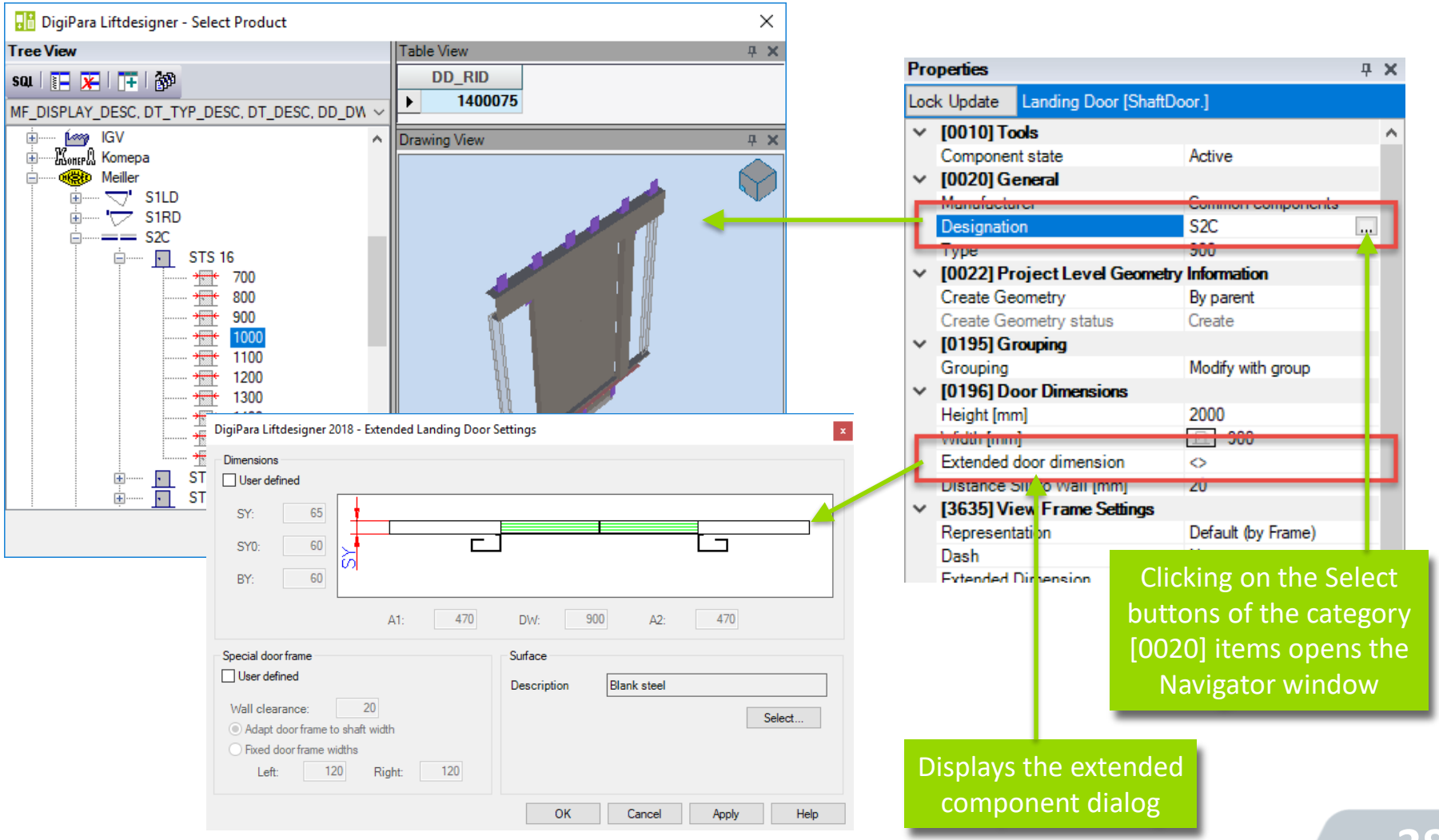




Clicking on an elevator component in the Data tree activates the selected component in the view frames and displays the corresponding component properties.

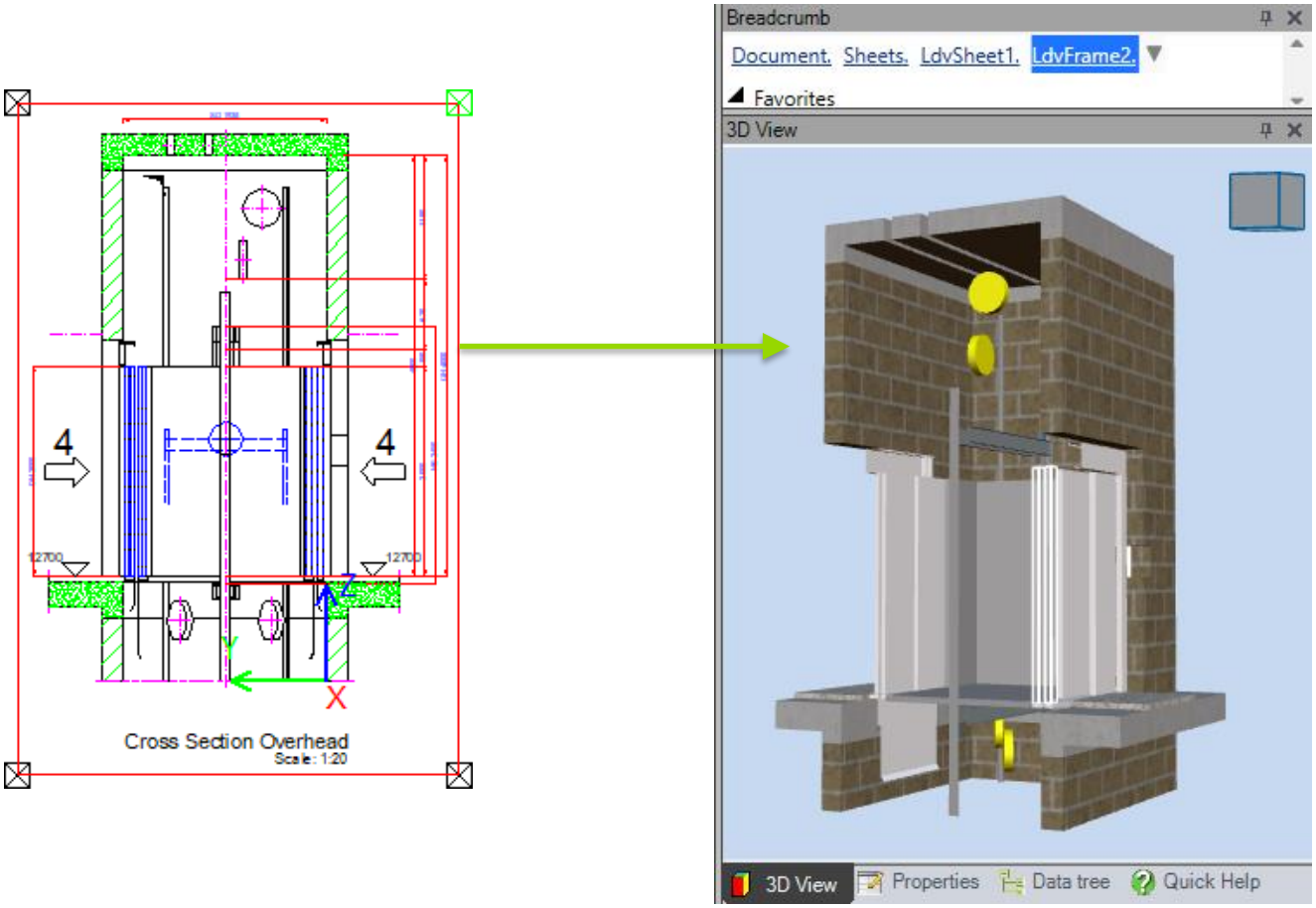
Program Basics - Properties

- Displays the selected component properties



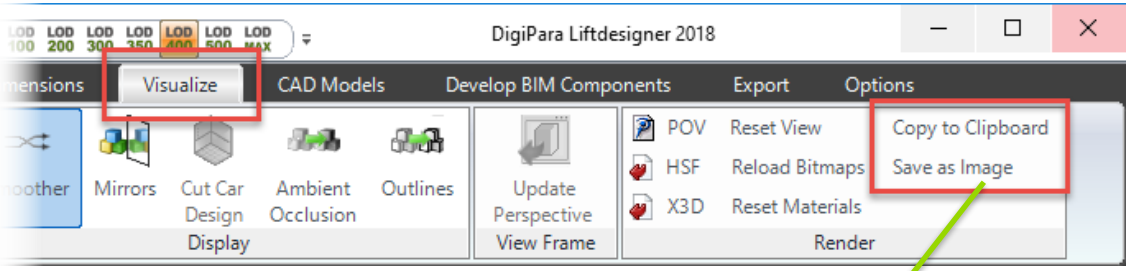
Program Basics - 3D View

- Shows the 3D elevator model depending on the selected / active view frame



Program Basics - 3D View

- The current 3D View can be saved as an image file (.png) or copied to the clipboard.



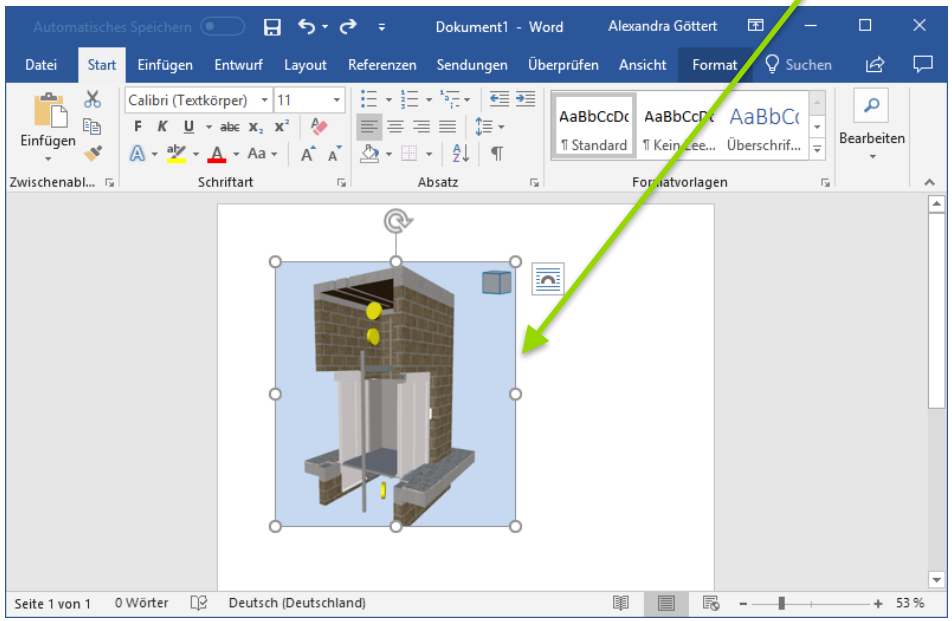
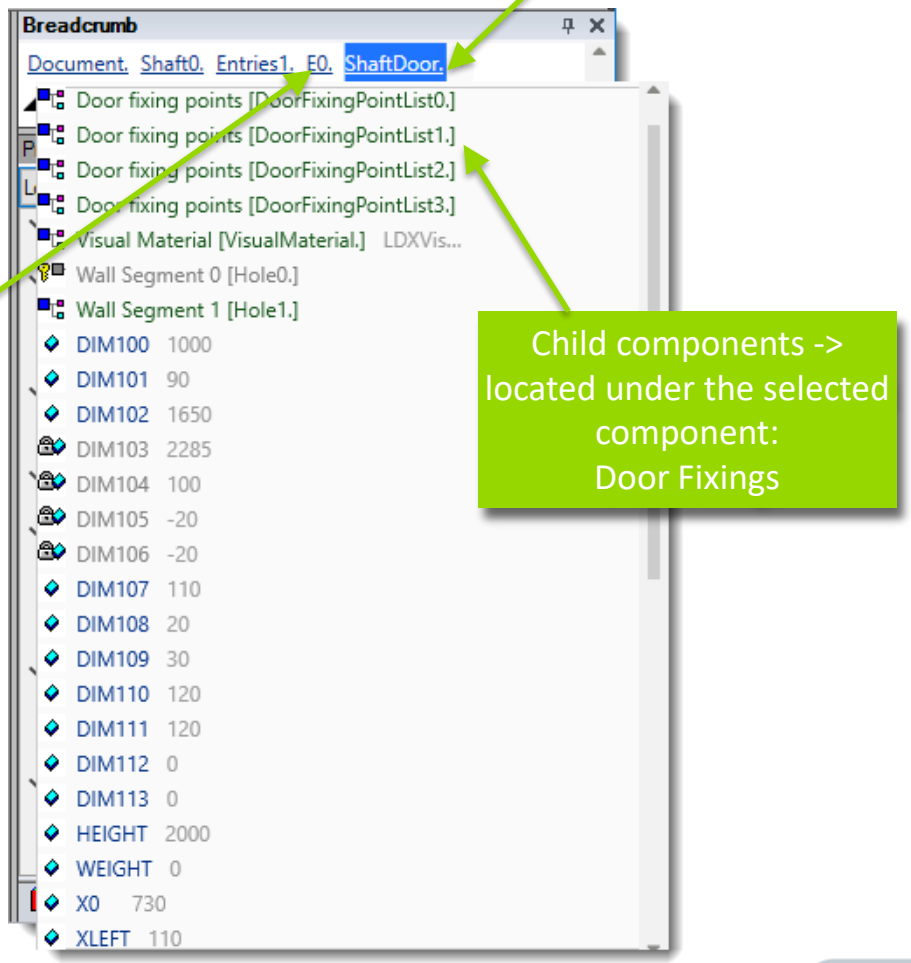


Image files can be loaded directly into the DigiPara Liftdesigner drawing via drag & drop.

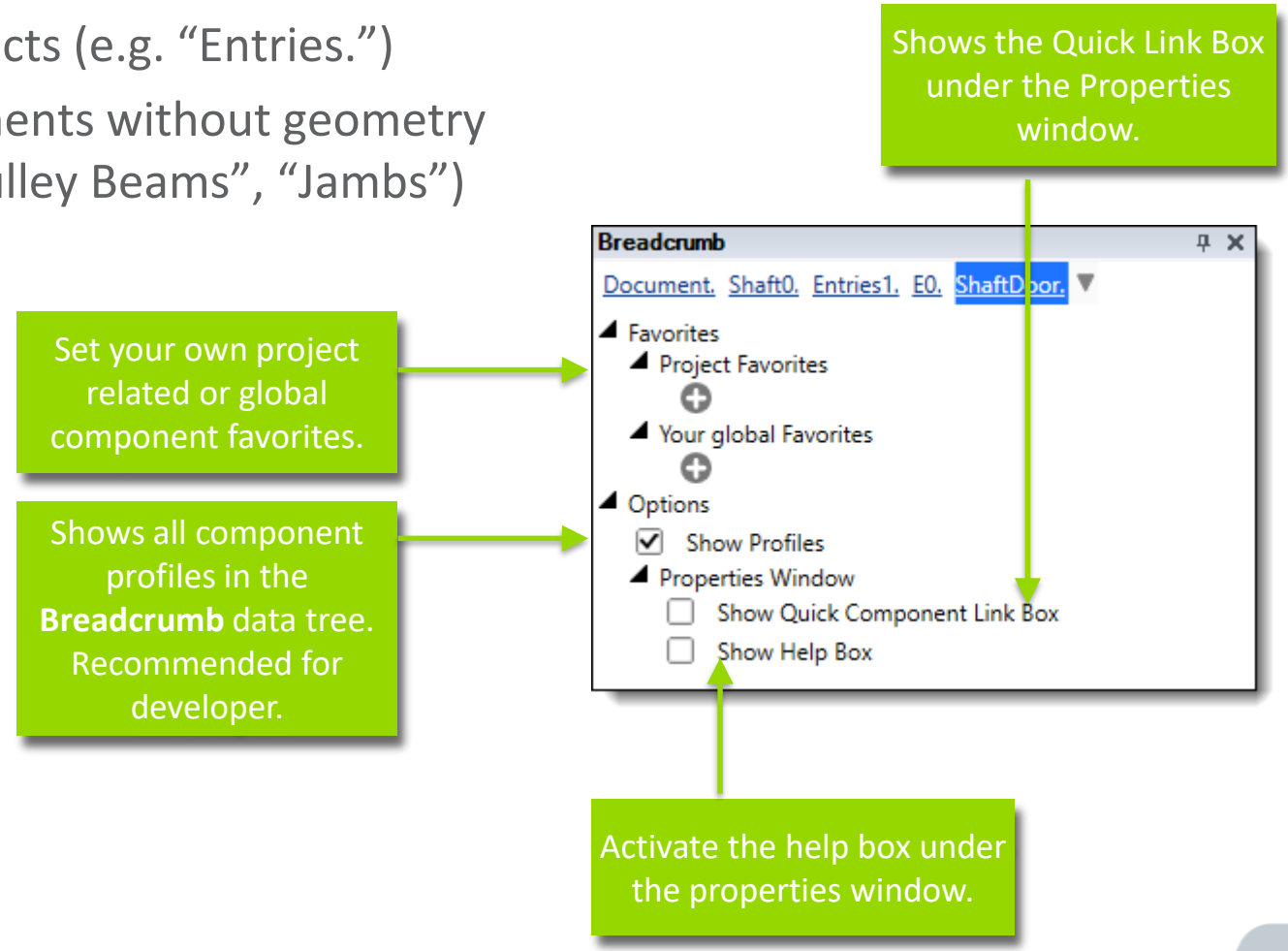
Program Basics - Breadcrumb

- Represents the respective section of the project structure in a flat hierarchy
  - Similar to the structure in the Data tree docking window



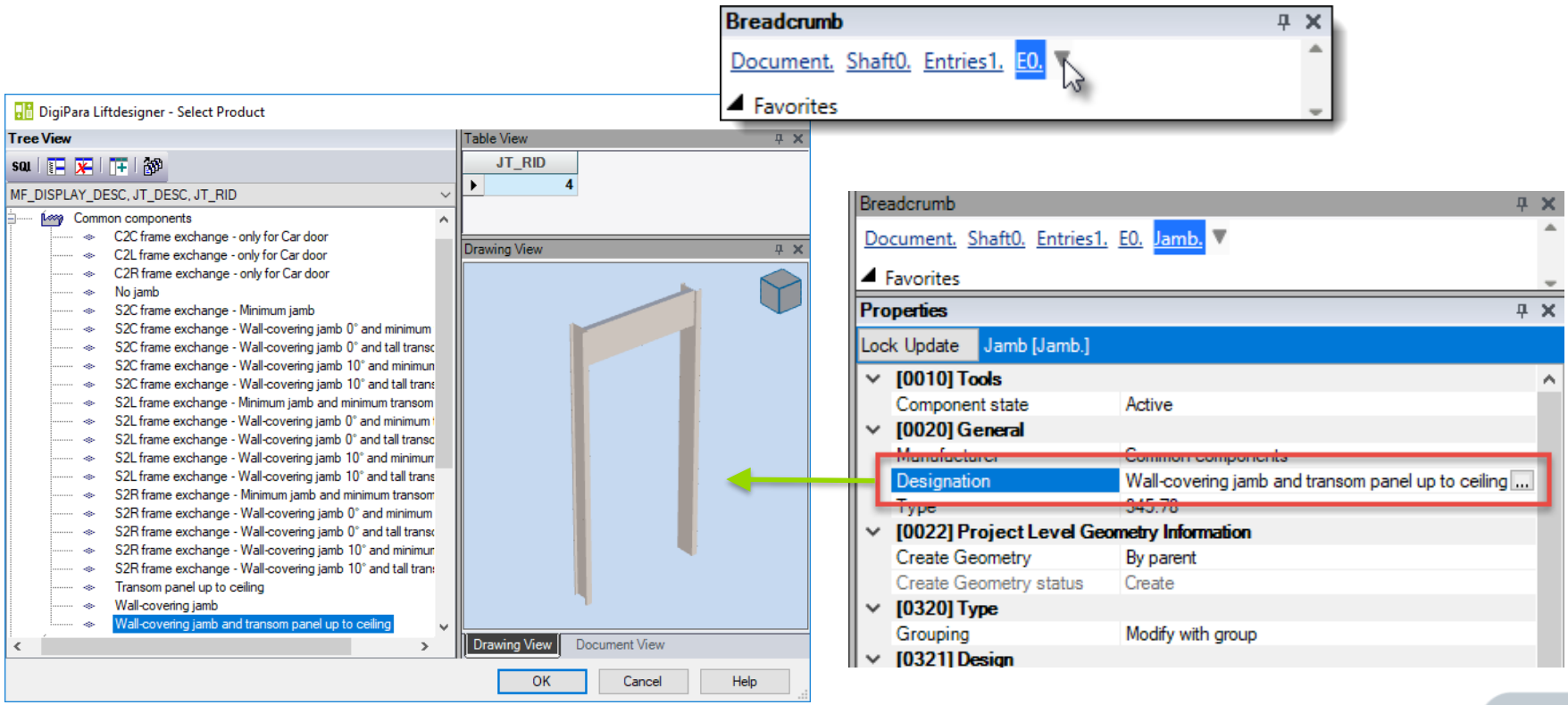
Breadcrumb Docking Window

- Provides the opportunity to select visible as well as invisible and inactive components like e.g.
  - List objects (e.g. “Entries.”)
  - Components without geometry (e.g. “Pulley Beams”, “Jambs”)
  - etc.



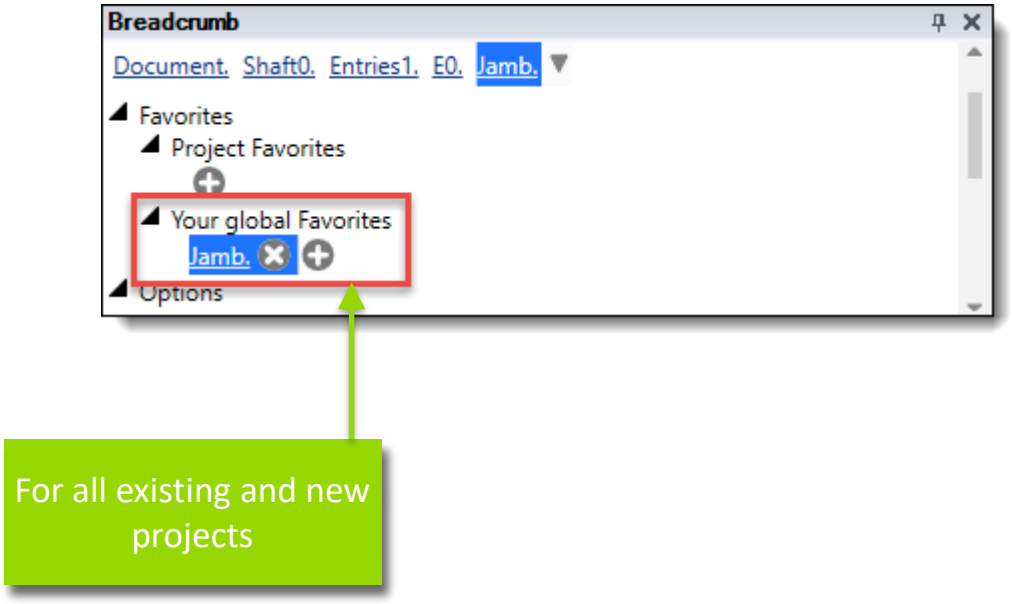
Practice - Controls & Docking Windows

- Select the add. door jamb for the front entrance via the Breadcrumb:
  - Change the type to **Wall-covering jamb and transom panel up to ceiling** via the Properties docking window



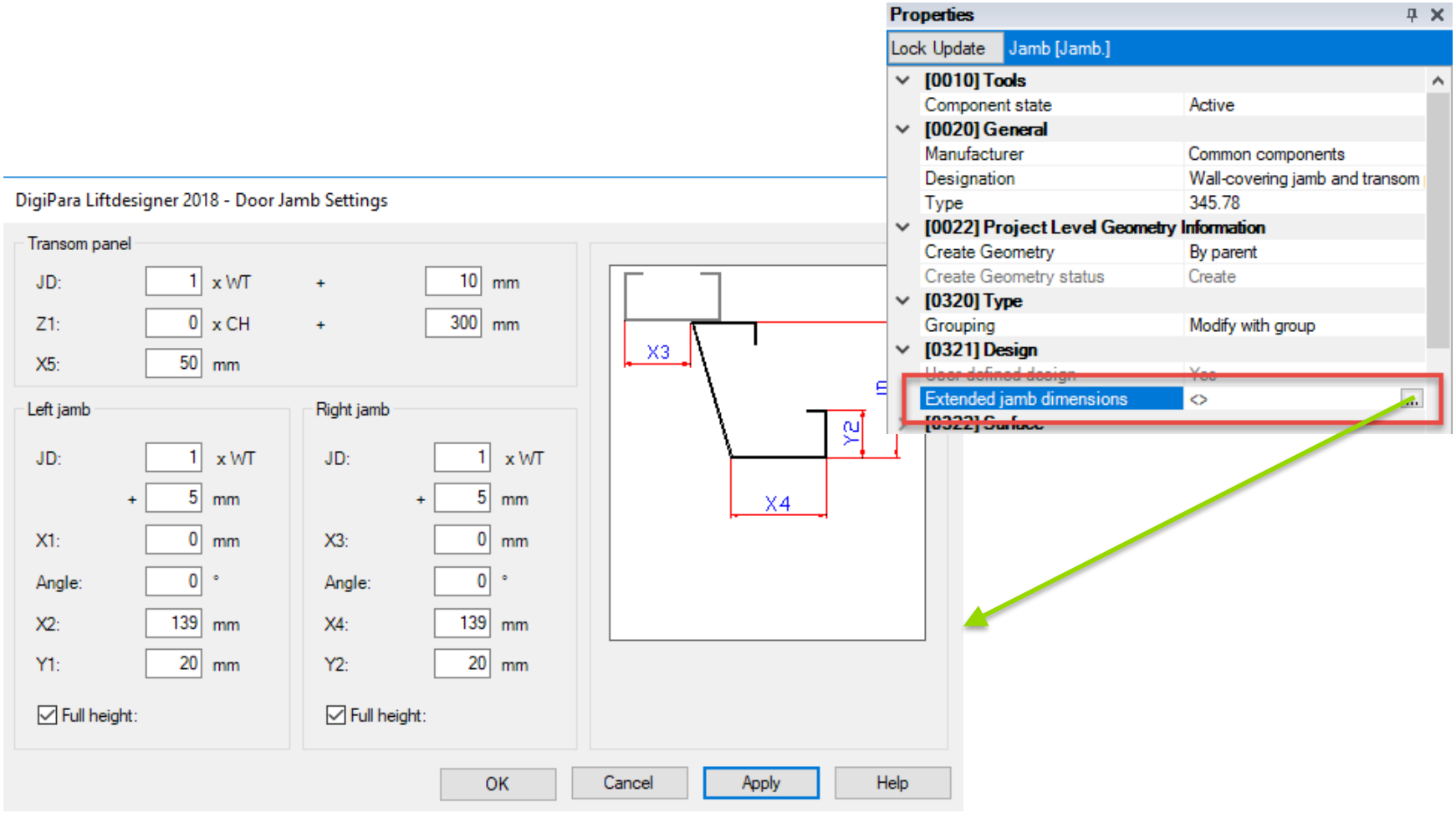
Practice - Controls & Docking Windows

- Set the additional door jamb as your global favorite in the Breadcrumb window.



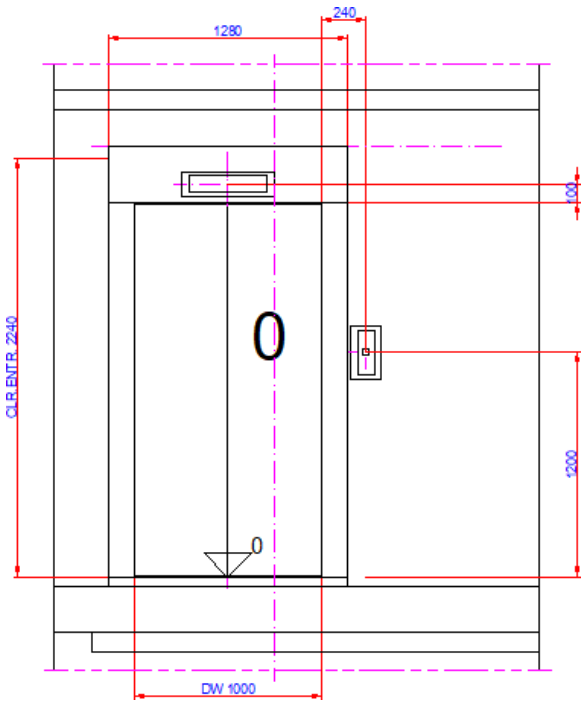
Practice - Controls & Docking Windows

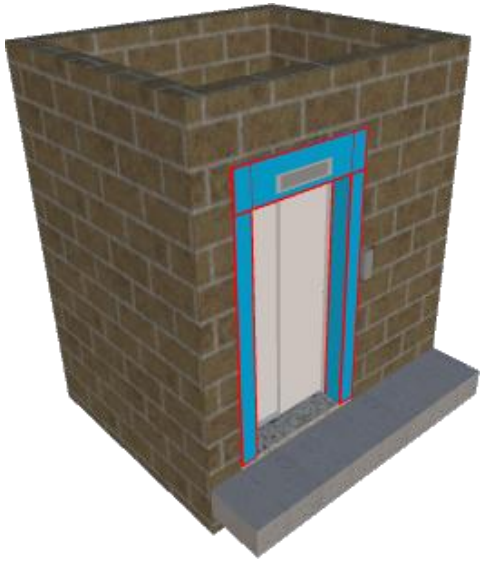
- Change the extended jamb settings as follows:

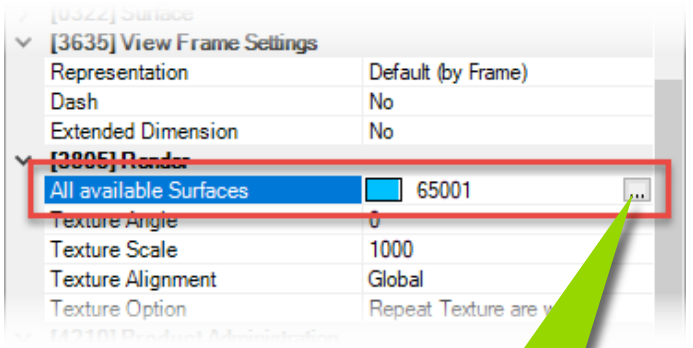


Practice - Controls & Docking Windows

- The result in the drawing / 3D View should look as follows:







Define an own color for your BIM component via the properties.

Program Basics

View Frames & Section Planes

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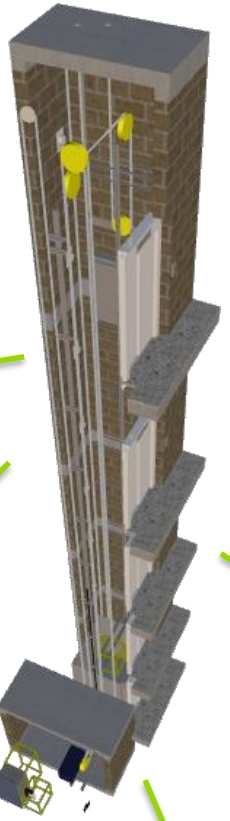
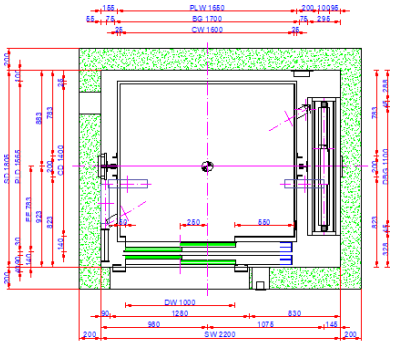
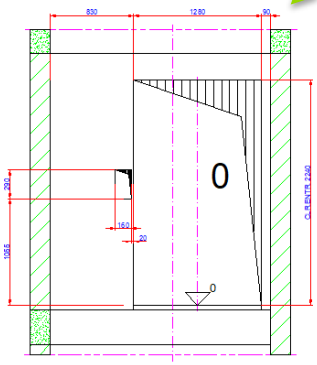
Program Basics - View Frames

- Creating different views based on the global 3D BIM model

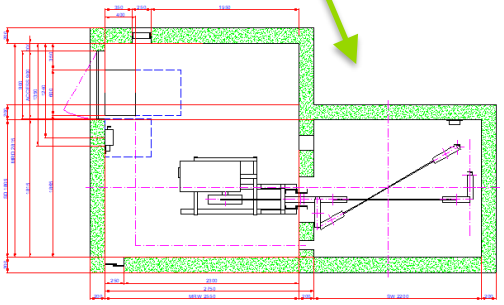




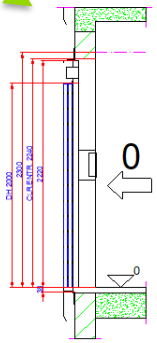
Plan View
Scale: 1:20



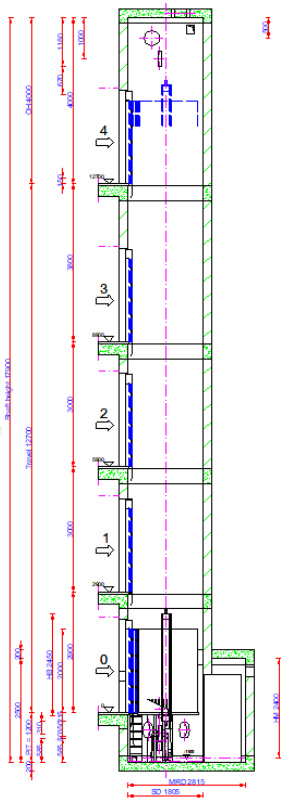
Entrance front
Detail inside
Scale: 1:20



Machine Room
Scale: 1:20



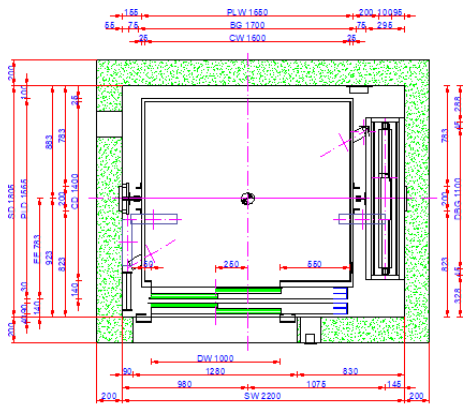
Entrance front
Detail side
Scale: 1:20



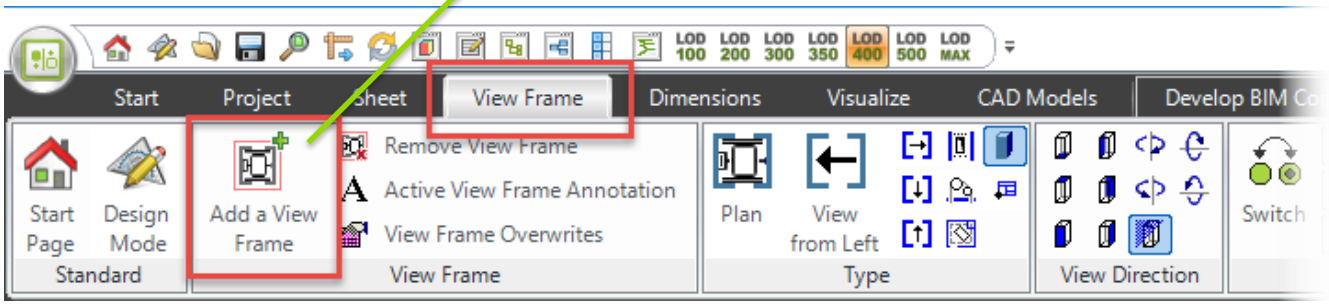
Vertical
Scale: 1:50

Program Basics - View Frames

- Adding new views via the View Frame tab & group
  - Always adds a new plan view to the drawing by default



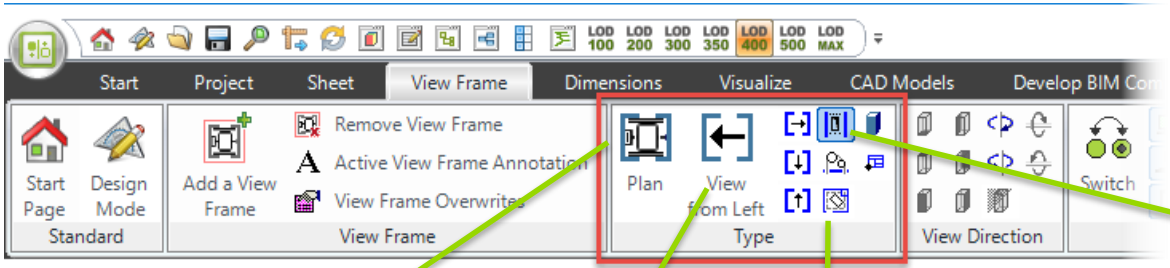
Plan View
Scale: 1:20

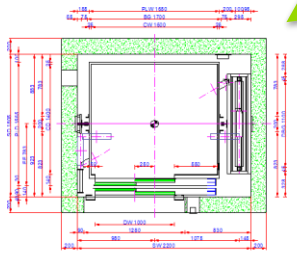


Deleting views via the DEL key or the Remove view frame option in the View frame tab → View frame group.

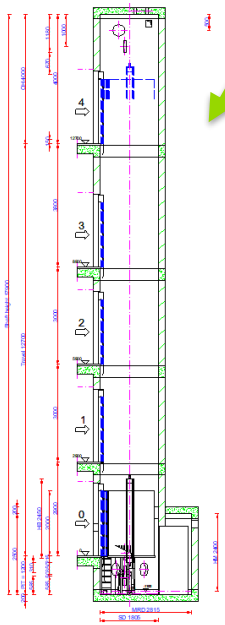
Program Basics - View Frames

- Switching views via the View frame tab → Type group

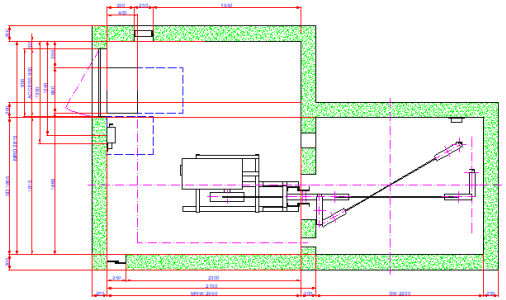




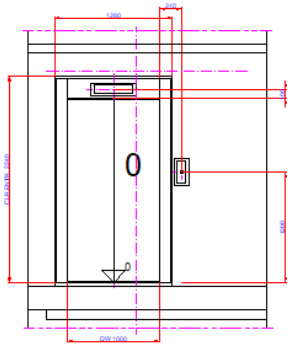
Plan View
Scale: 1:20



Vertical
Scale: 1:50

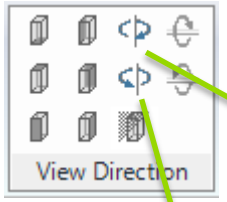


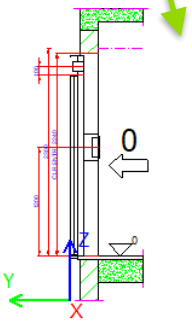
Machine Room
Scale: 1:20



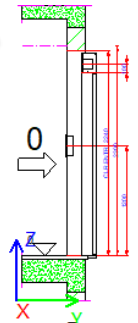
Entrance front
Detail outside
Scale: 1:20

Rotate entrance views and vertical sections





Entrance front
Detail outside
Scale: 1:20

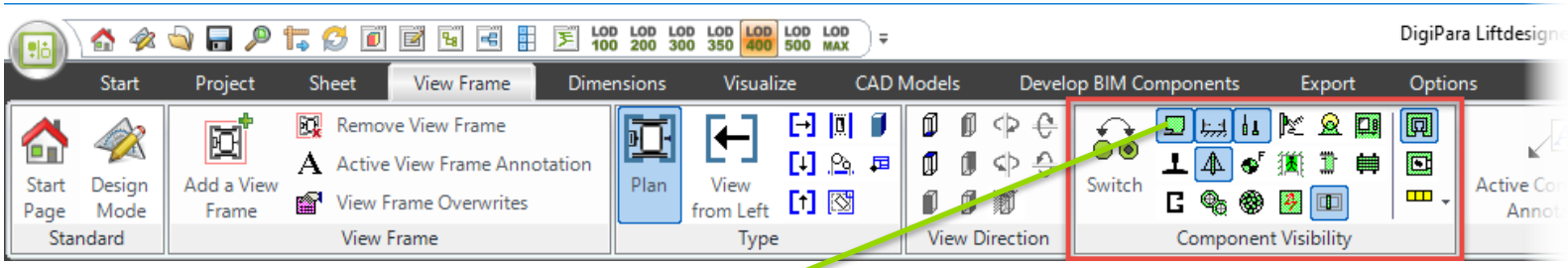


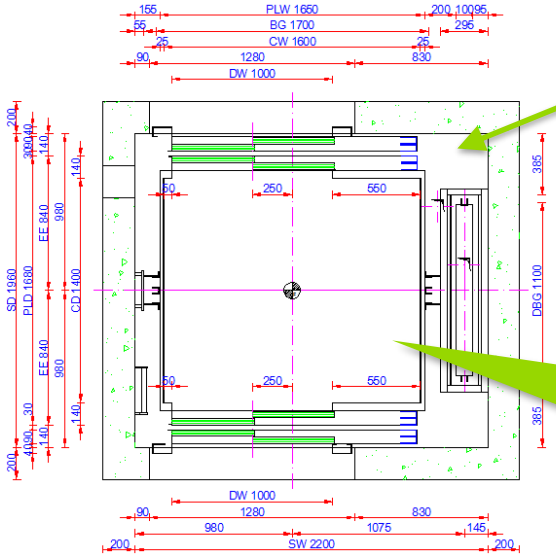
Entrance front
Detail outside
Scale: 1:20

Create any kind of view from one data model

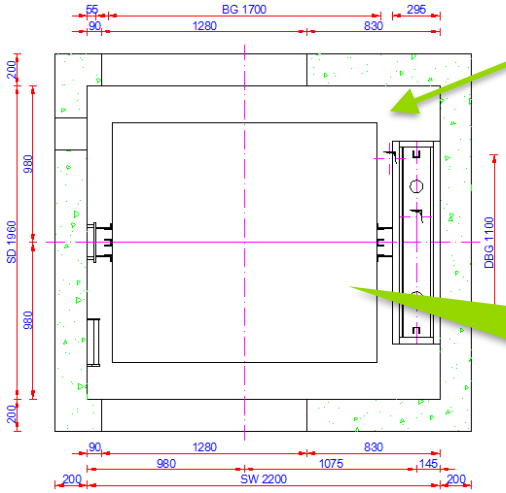
Program Basics - View Frames

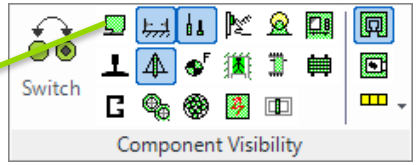
- Switching on/off elevator BIM components in the view via the View frame tab → Component Visibility group
  - Local per view frame operation





Switched on car and door components.

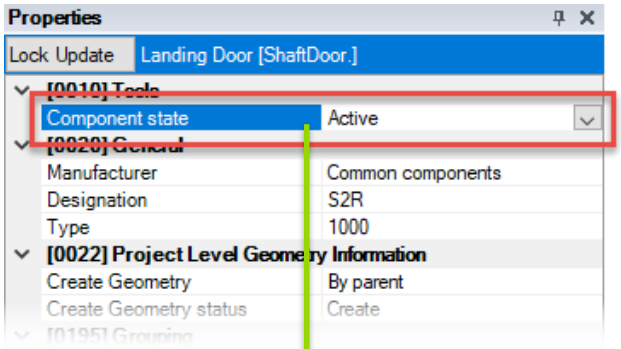


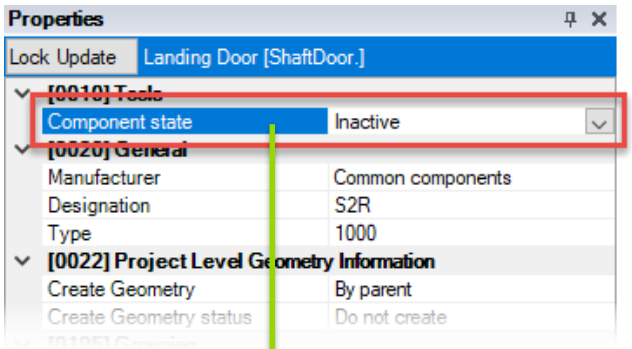


Switched off car and door components

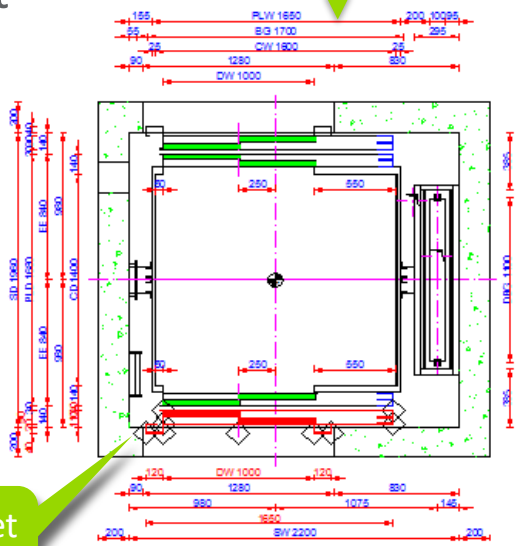
Program Basics - View Frames

- Deactivating single BIM components via the Component state property

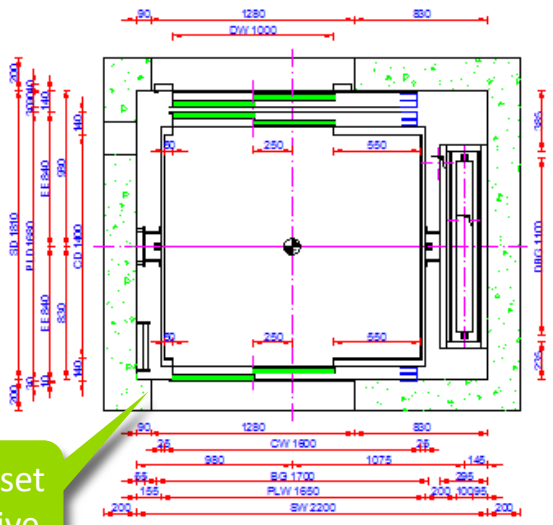




- Global project operation



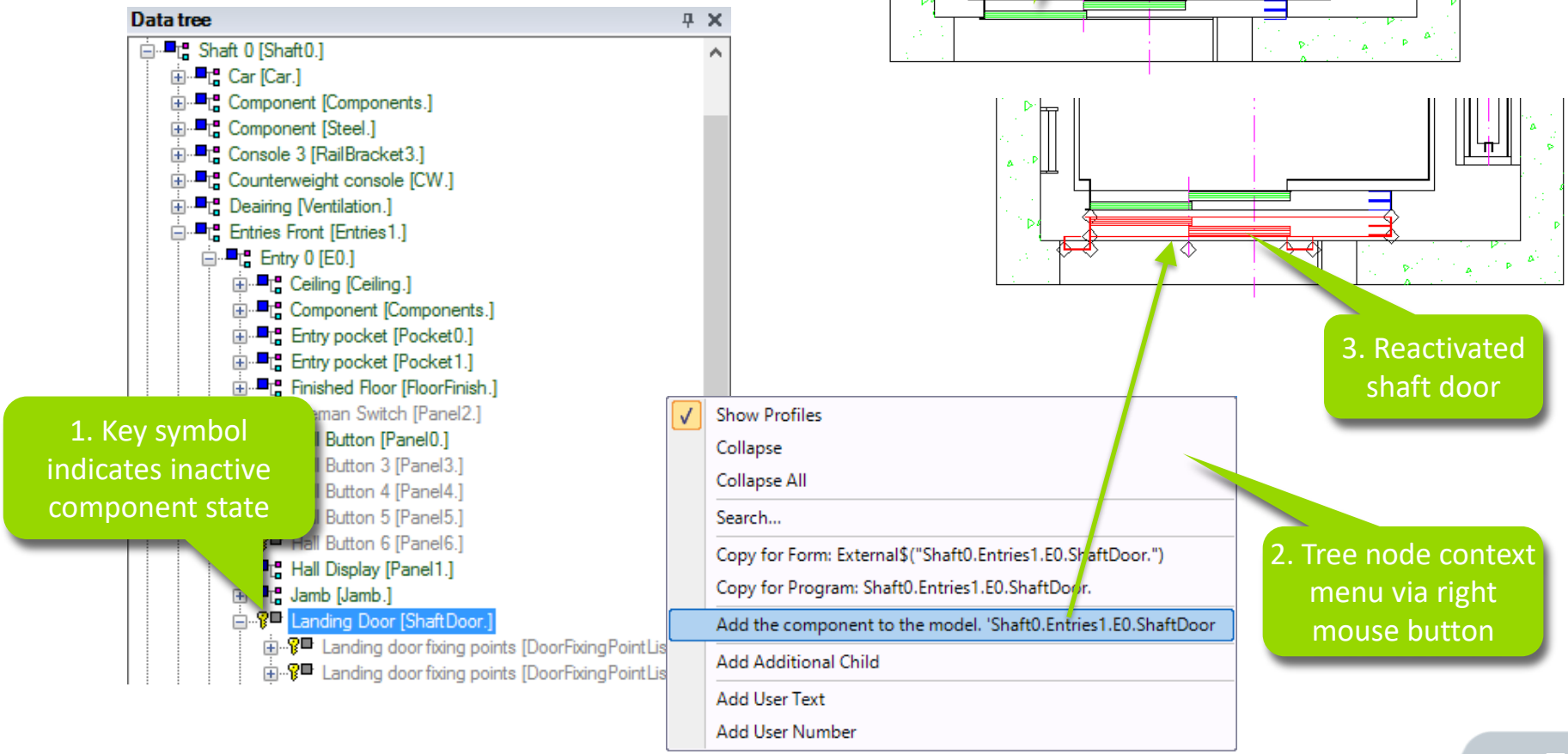
Door set active.



Door set inactive

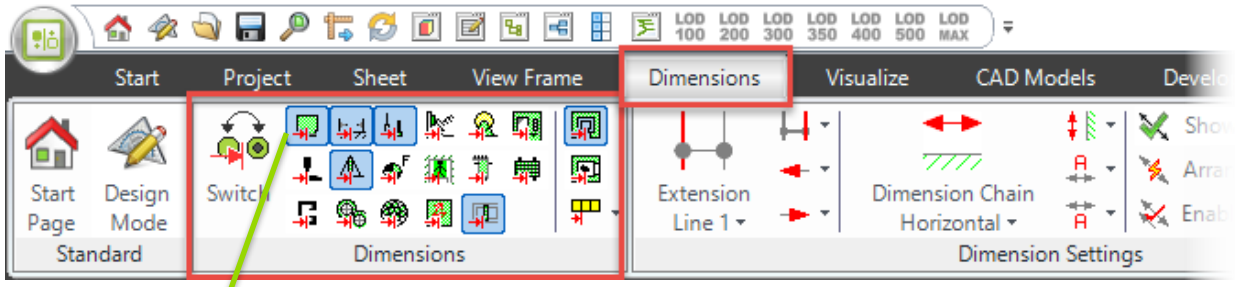
Program Basics - View Frames

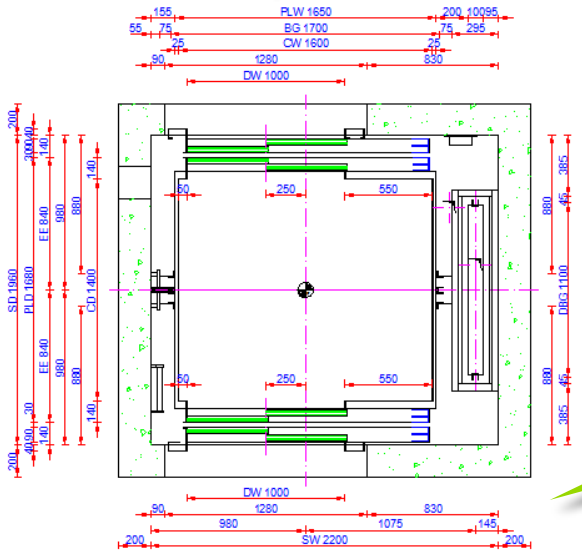
- Reactivating BIM components
  - via the corresponding component Data tree node / item



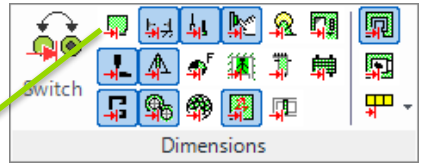
Program Basics - View Frames

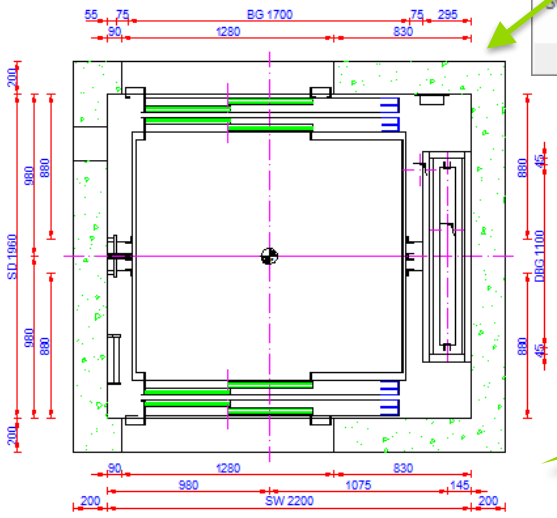
- Switching dimensions on/off via the Dimensions tab → Dimensions group
  - Local per view frame operation





Switched on car & door dimensions

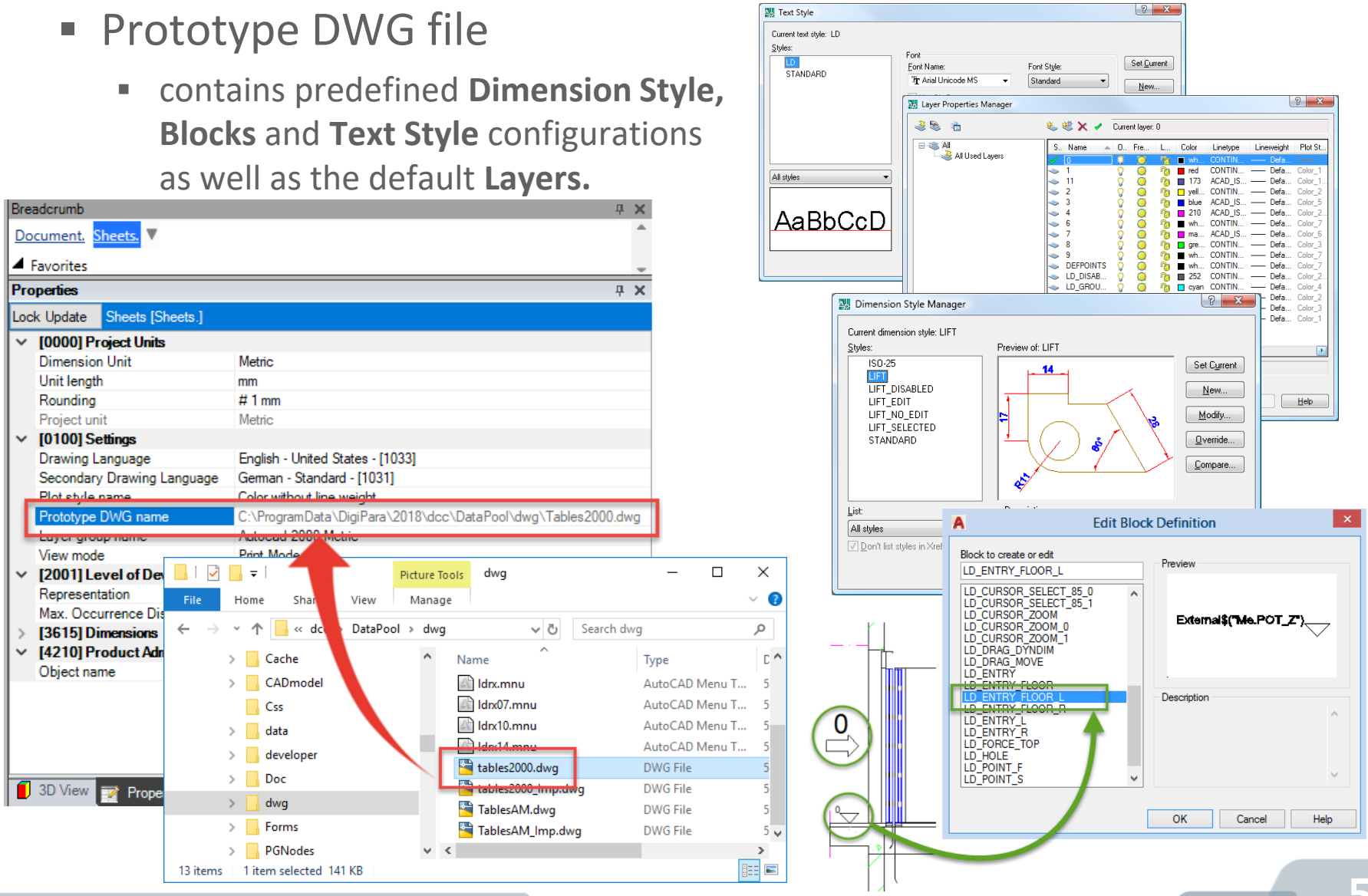




Switched off car & door dimensions

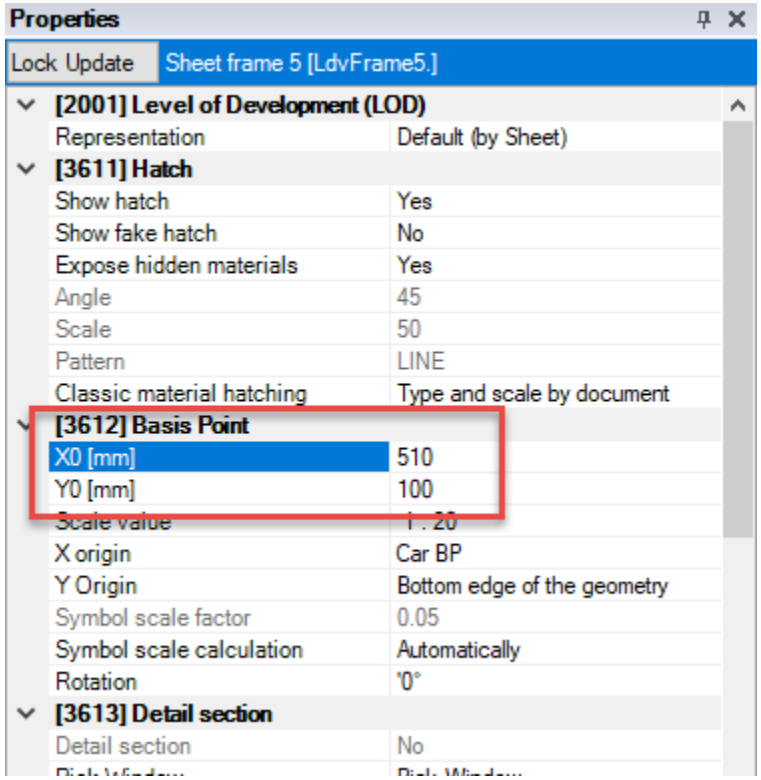
Program Basics - View Frame Layout

- Prototype DWG file
  - contains predefined **Dimension Style, Blocks** and **Text Style** configurations as well as the default **Layers.**



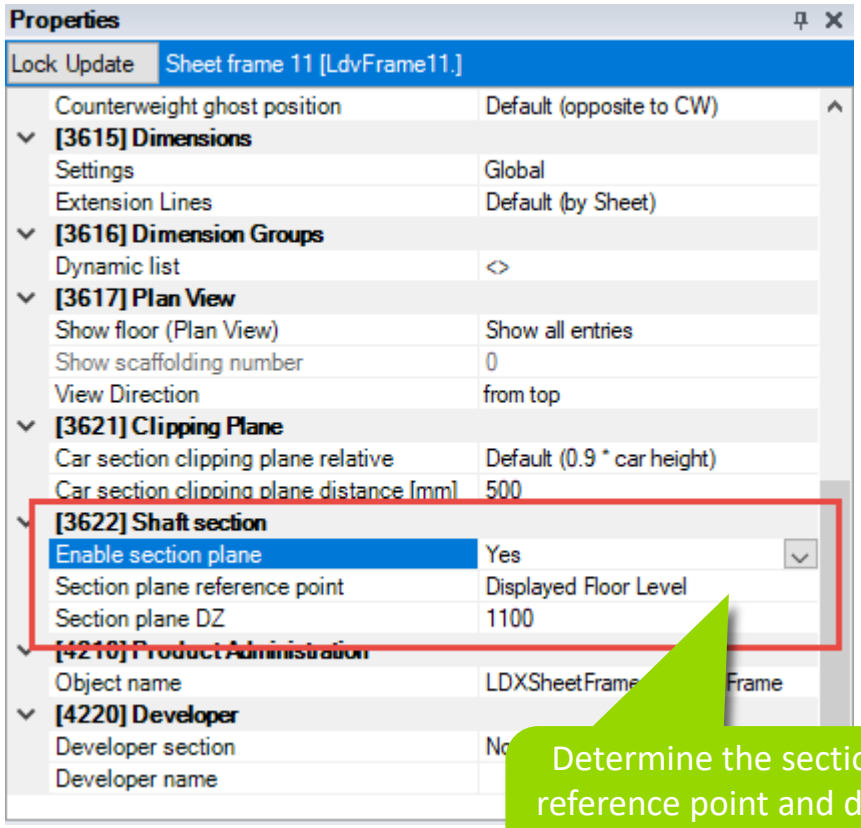
Program Basics - View Frames

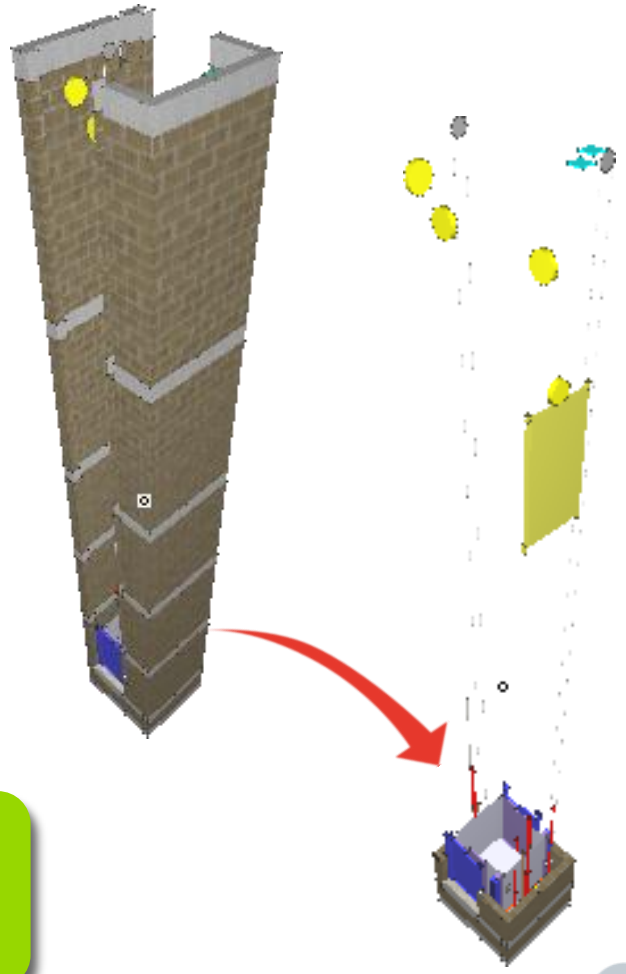
- Can be positioned relatively to the sheet basis point via the X0 and Y0 properties
  - The sheet basis point is specified by the lowest left point of the geometry in the drawing area



Program Basics – Section Planes

- For setting up own section plane positions the status of the **Enable section plane** operation has to be **Yes**.





Determine the section plane reference point and define the corresponding section plane dimension value.

Program Basics

Sheets & Sheet Templates

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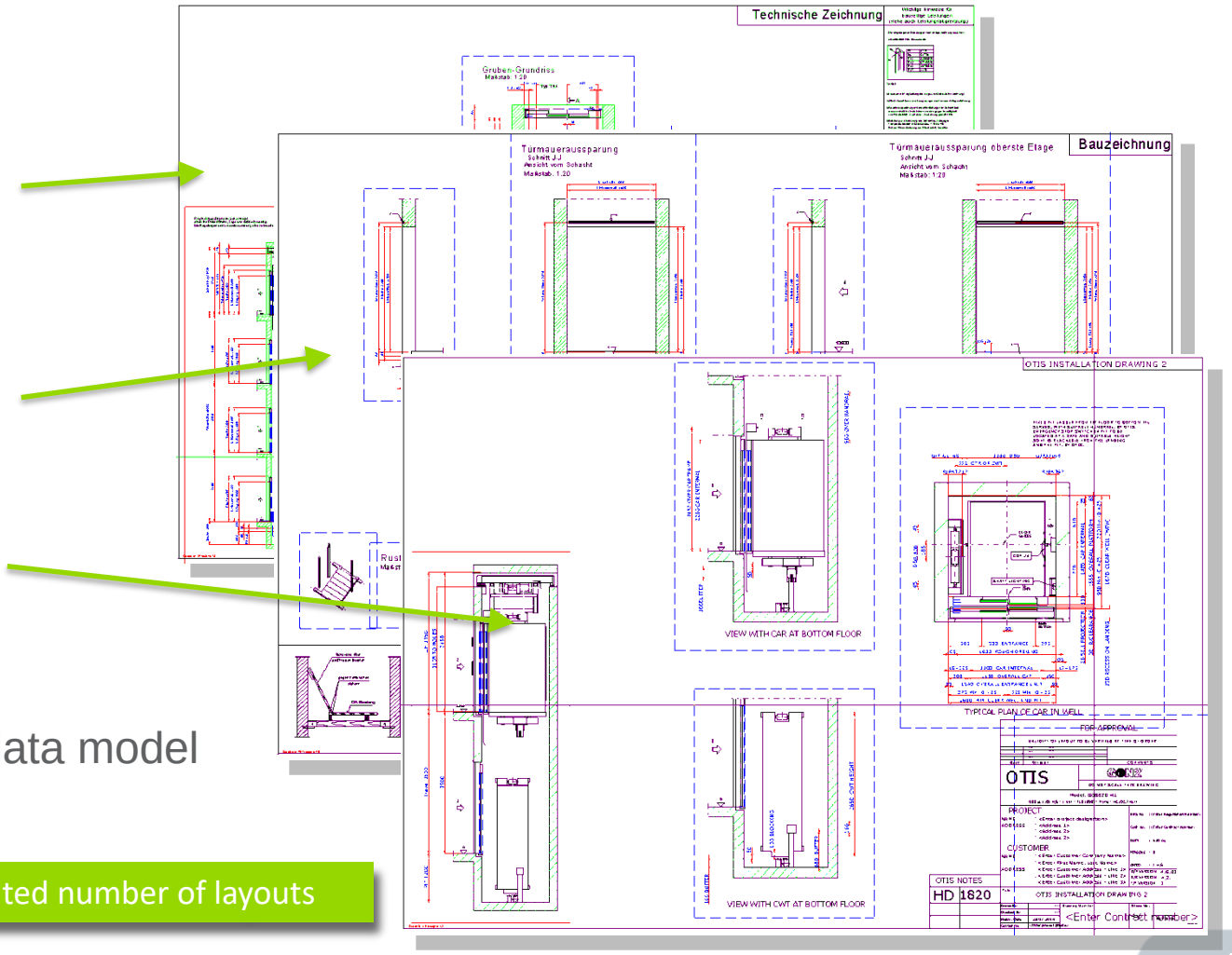
Program Basics - Sheets

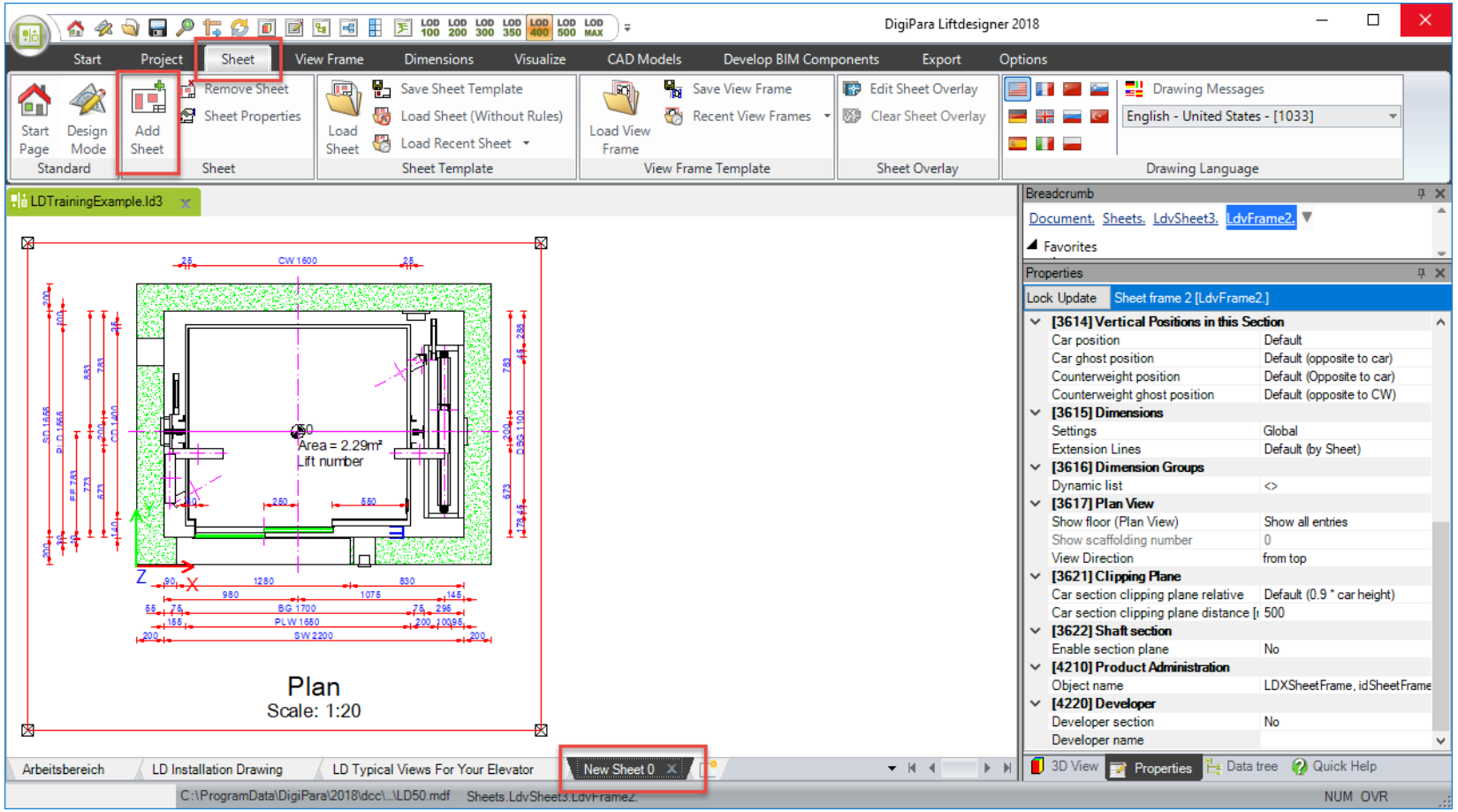


One elevator = One data model

Unlimited number of layouts

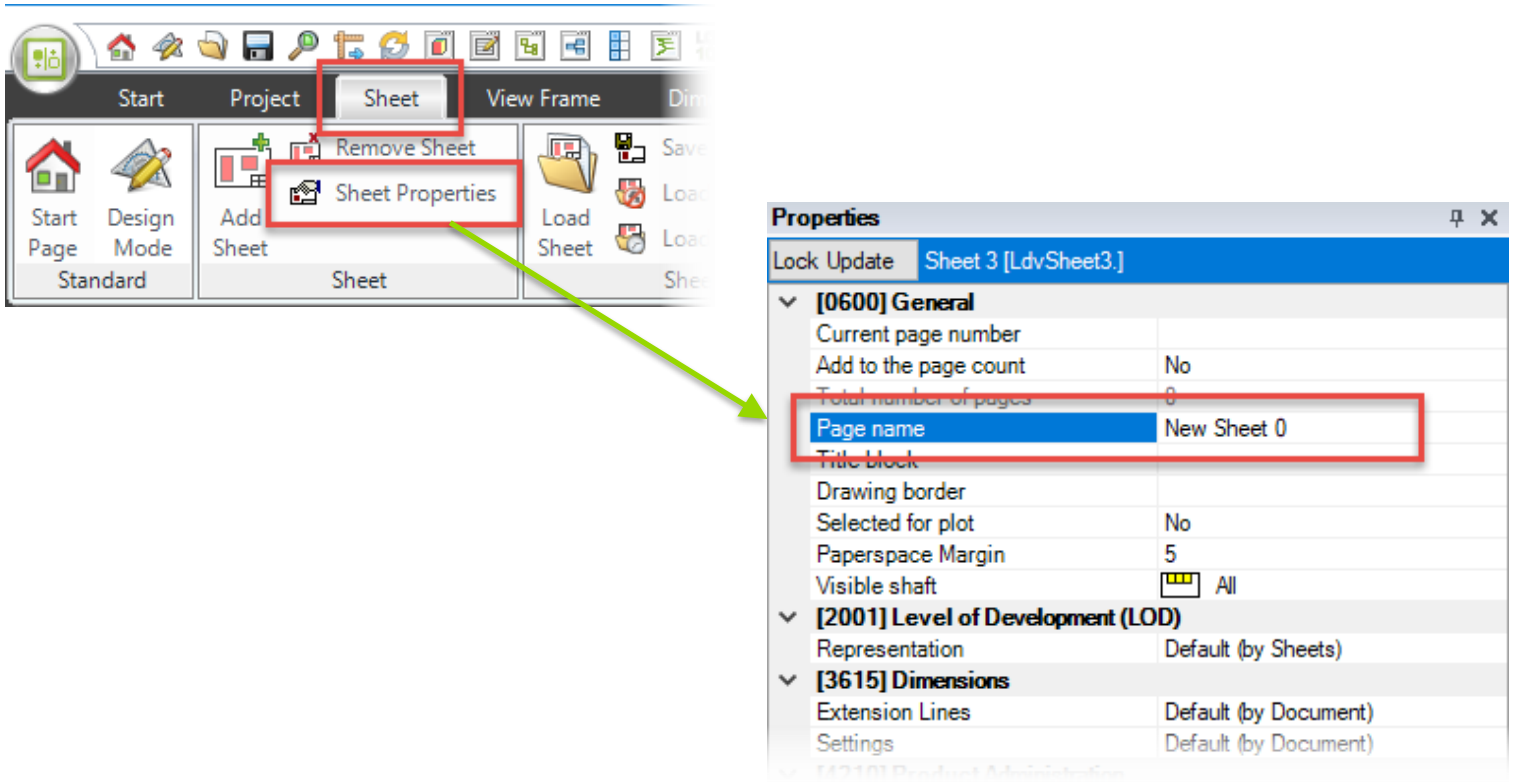
Program Basics - Sheets

- Can be added via the Sheet tab → Sheet group
  - A new sheet always contains a plan view by default



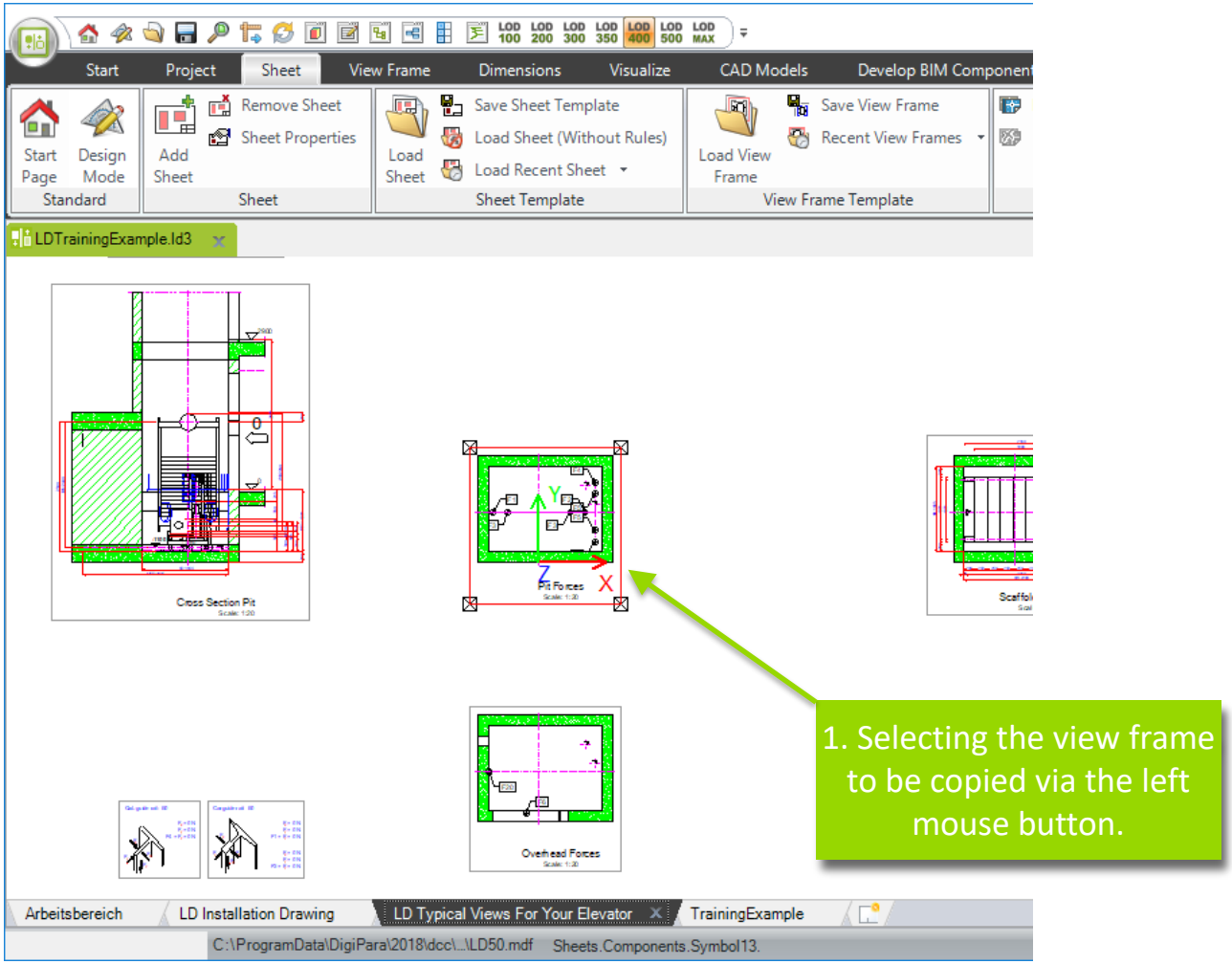
Program Basics - Sheets

- Can be renamed via the Sheet properties
  - Displaying the corresponding properties via the Sheet tab → Sheet group or in the drawing area via the right mouse button context menu



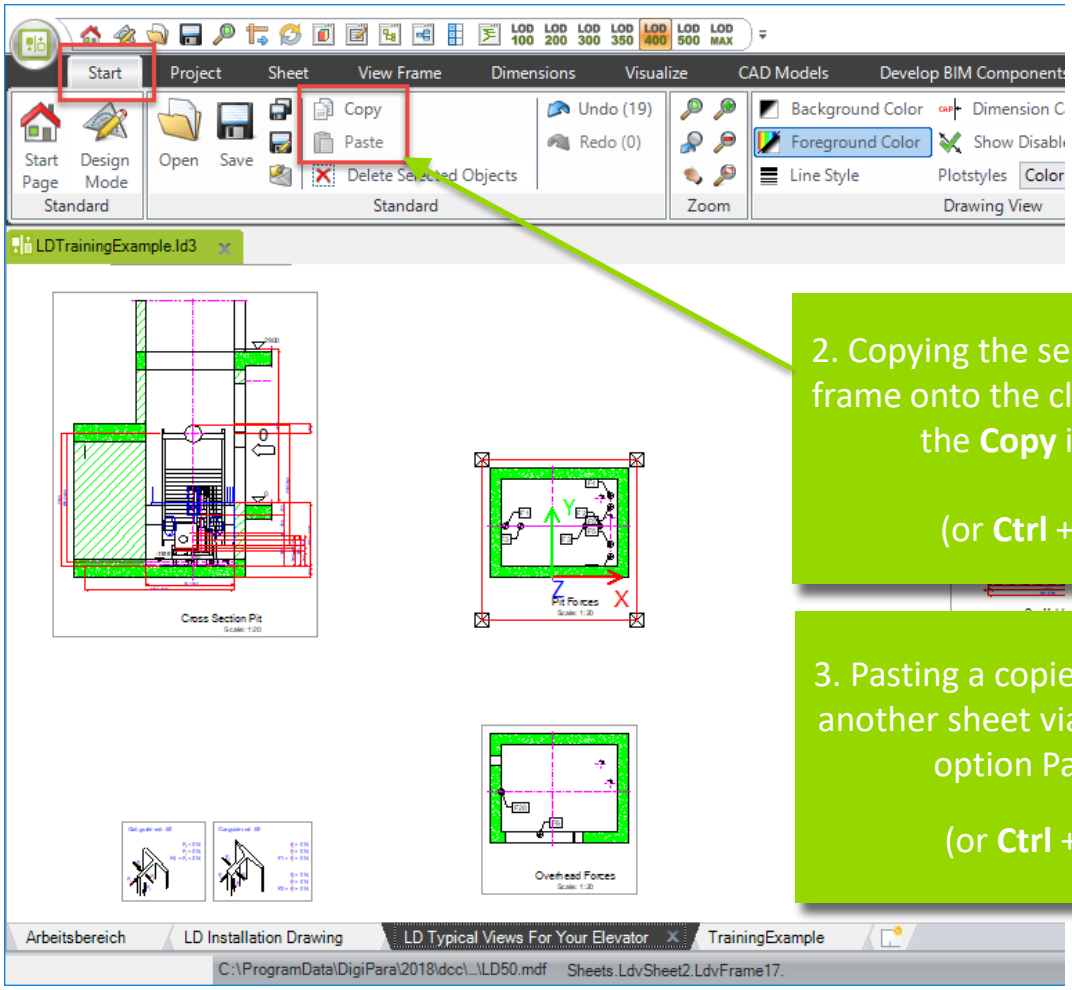
Program Basics - Sheets

- Copying view frames from one sheet into another



Program Basics - Sheets

- Copying view frames from one sheet into another



2. Copying the selected view frame onto the clipboard via the **Copy** item

(or **Ctrl** + **C**)

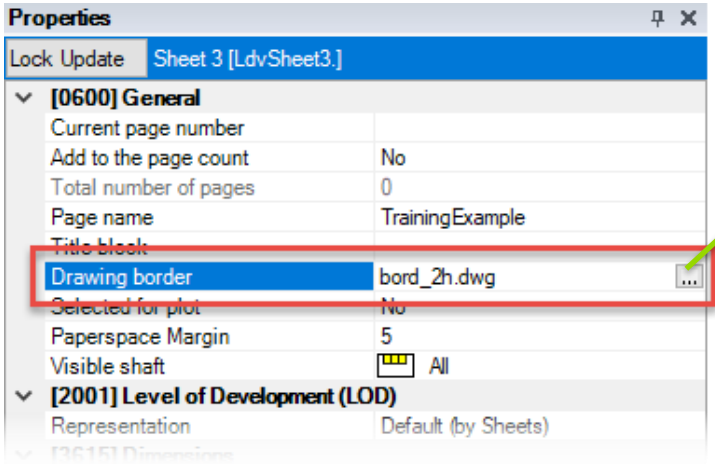
3. Pasting a copied view into another sheet via the menu option Paste

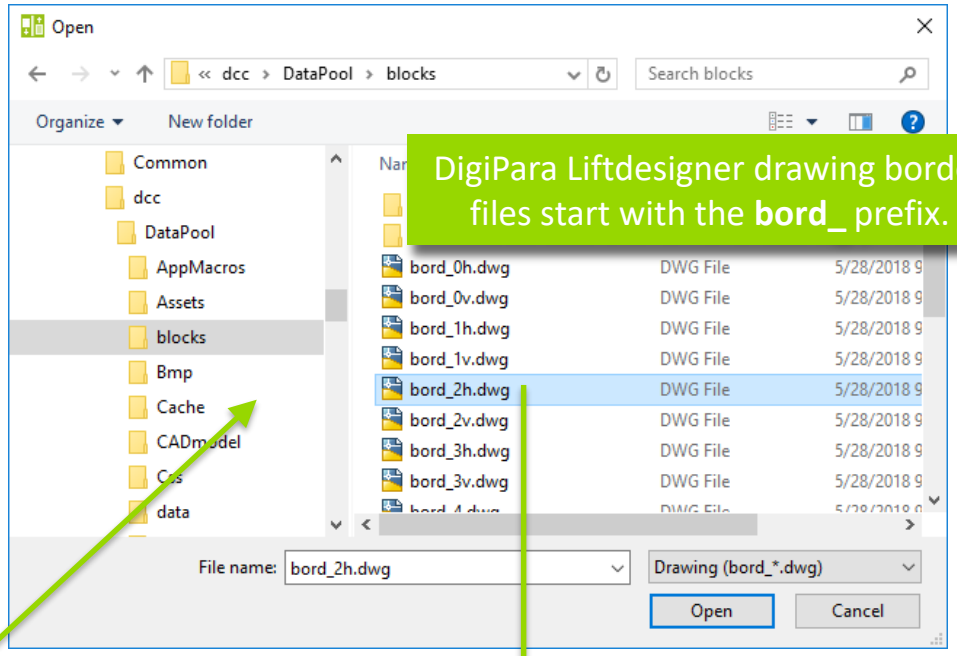
(or **Ctrl** + **V**)

Sheets - Drawing Borders

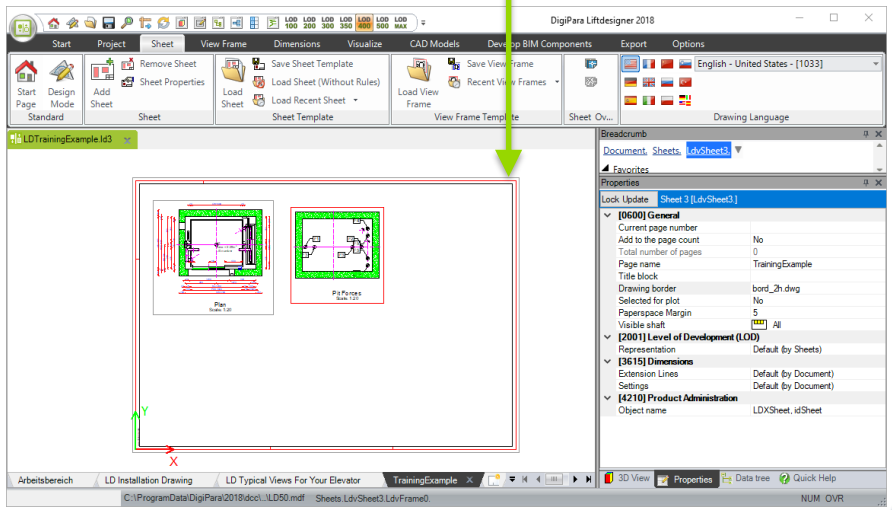
- Can be loaded via the Sheet properties

The sheet properties get displayed via the **Sheet** tab → **Sheet** group





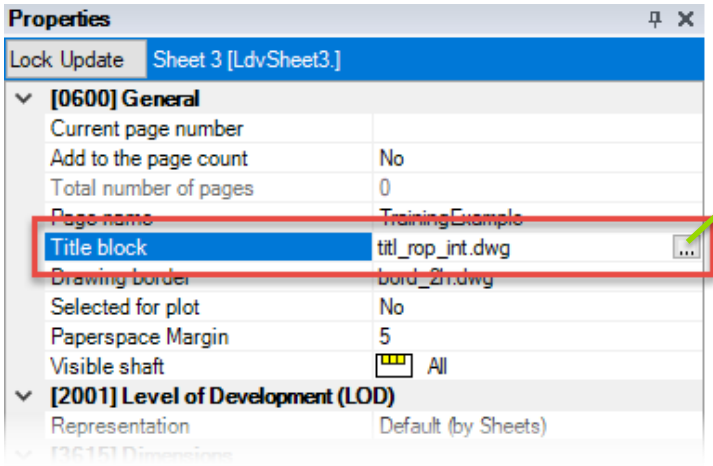
DigiPara Liftdesigner drawing border files start with the **bord_** prefix.

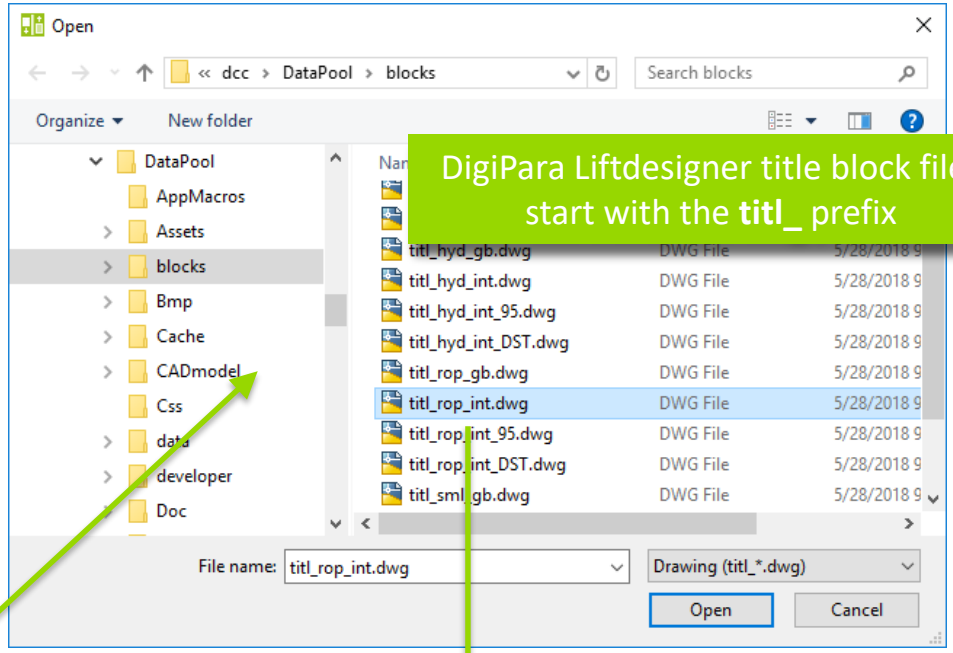


Sheets - Title Blocks

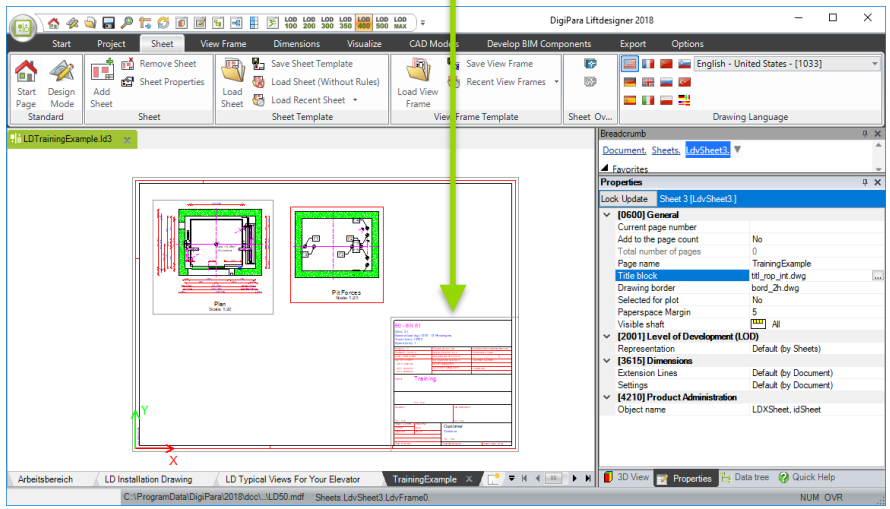
- Can be loaded via the Sheet properties

The sheet properties get displayed via the **Sheet** tab → **Sheet** group





DigiPara Liftdesigner title block files start with the **titl_** prefix



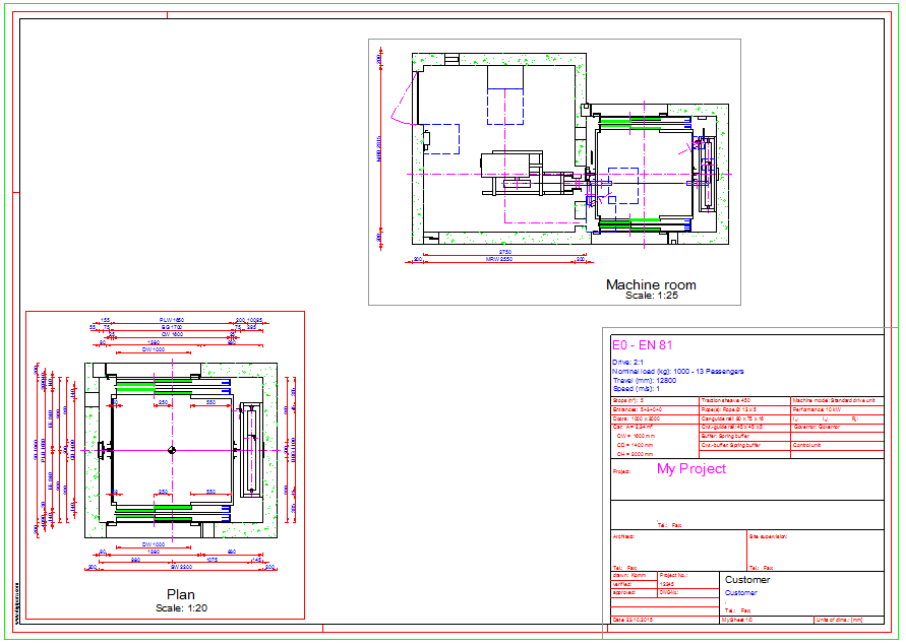
Differences between title blocks for:

Traction elevator – *_rop_*

Hydraulic elevator – *_hyd_*

Practice - View Frames & Sheets

- Please modify the previously created LDTrainingSample.ld3 file as follows:
- Create a new sheet
  - Add a Machine Room View
  - Add a Plan View
  - Add a drawing border bord_2h.dwg
  - Add a title block titl_rop_int.dwg
  - Move the views inside the drawing border
  - Rename the sheet to: My Views
- Save the project afterwards



Program Basics

BIM Components & Product Options

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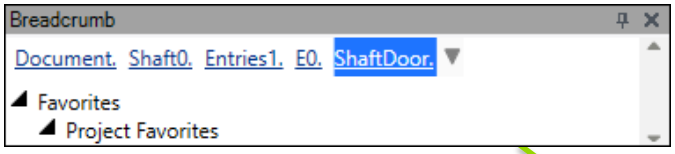
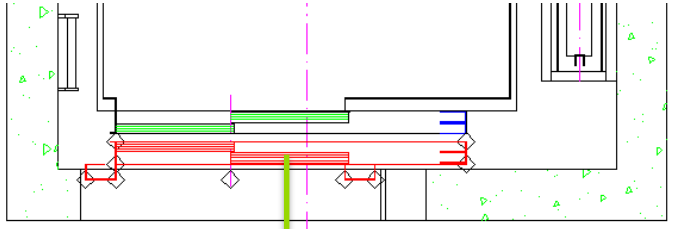
Program Basics – BIM Components

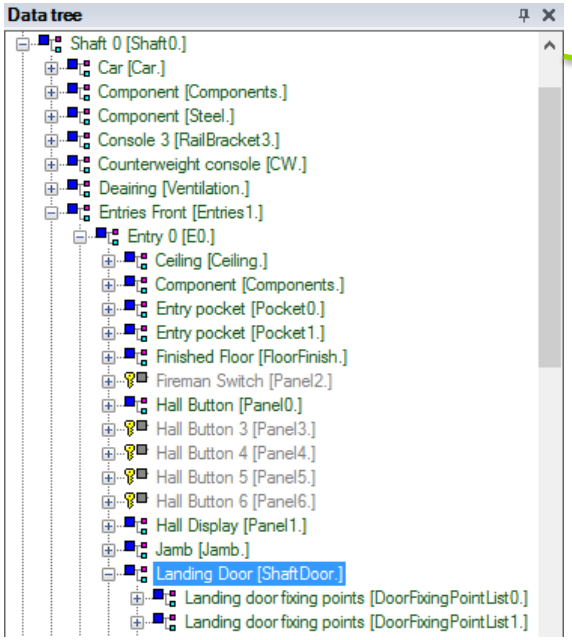
- List components
  - Shaft door
  - Rail brackets
  - Shaft lighting
  - etc.
- Single components
  - Gearing
  - Car frame
  - Safety gear
  - etc.

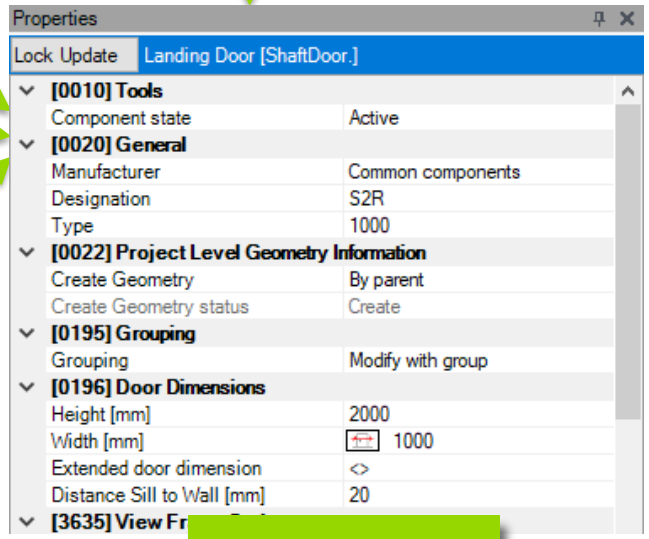
Program Basics – BIM Components

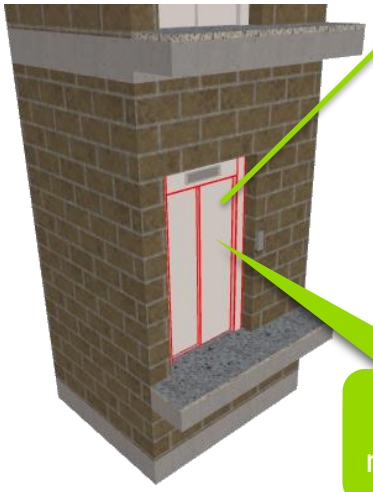
- Can be selected via the Datatree, Breadcrumb, 3D View or directly in the drawing









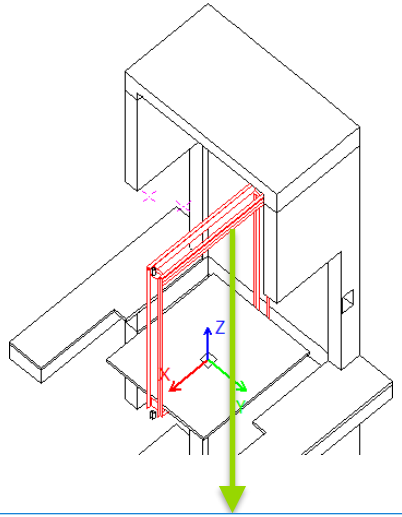


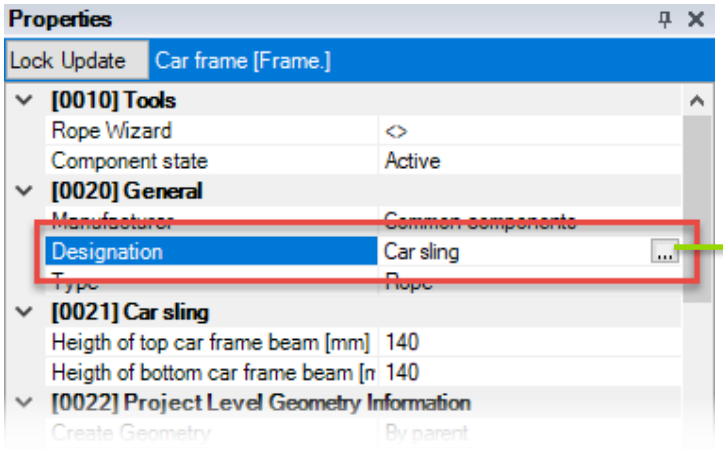
SHIFT + left mouse button

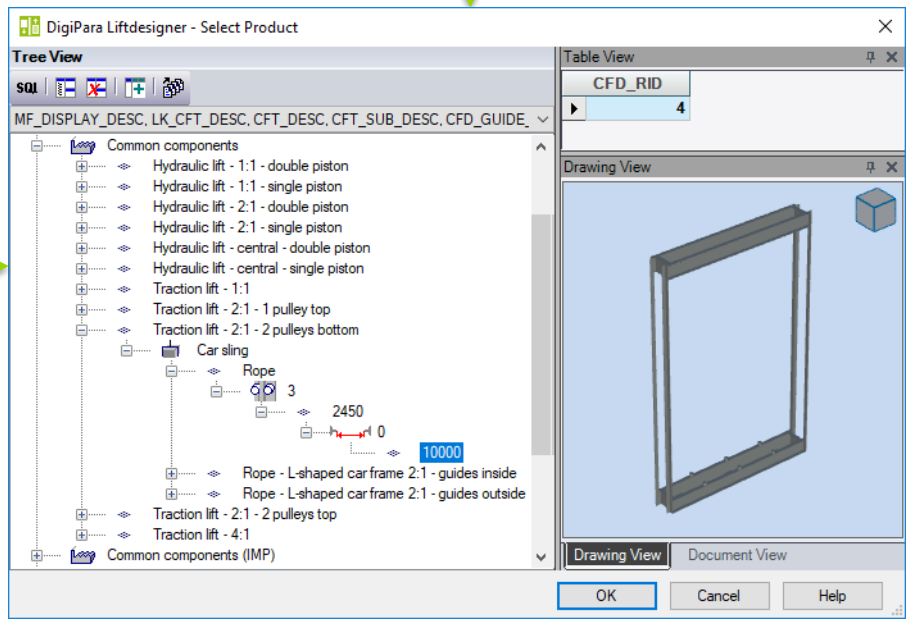
to e.g. display the landing door properties.

Program Basics – BIM Components

- Can be exchanged via the Component Navigator
  - By double clicking on the corresponding component
  - Via the component‘s category [0020] property items

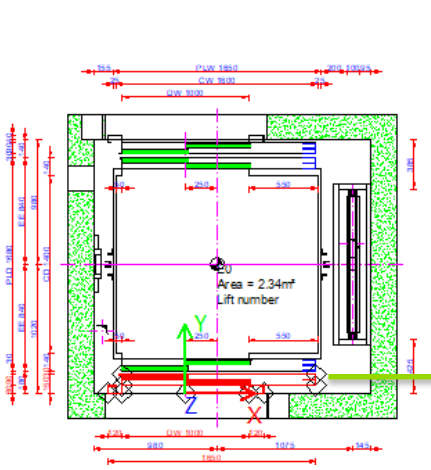


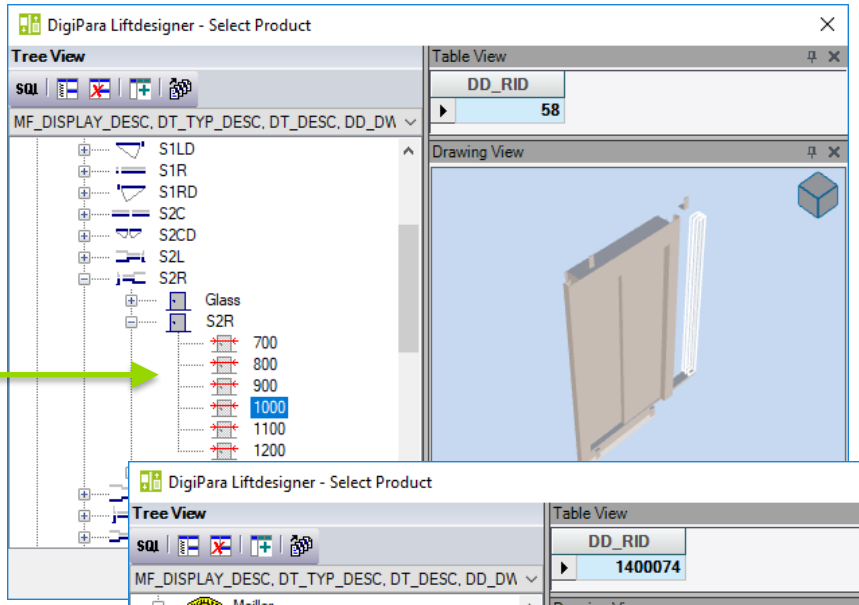


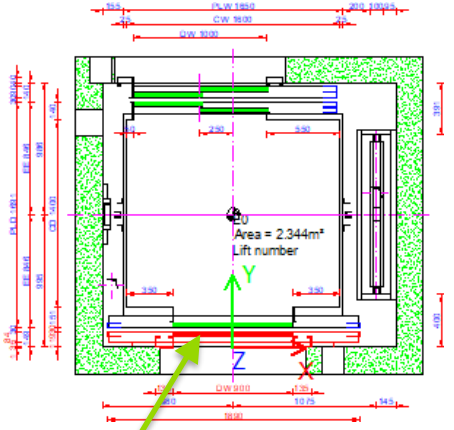


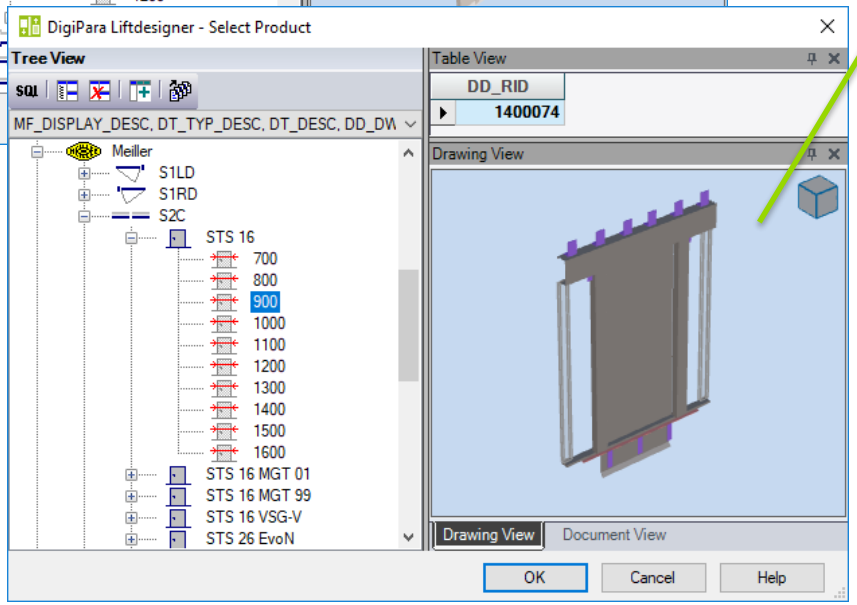
Program Basics – BIM Components

- Exchanging list components e.g. a shaft door







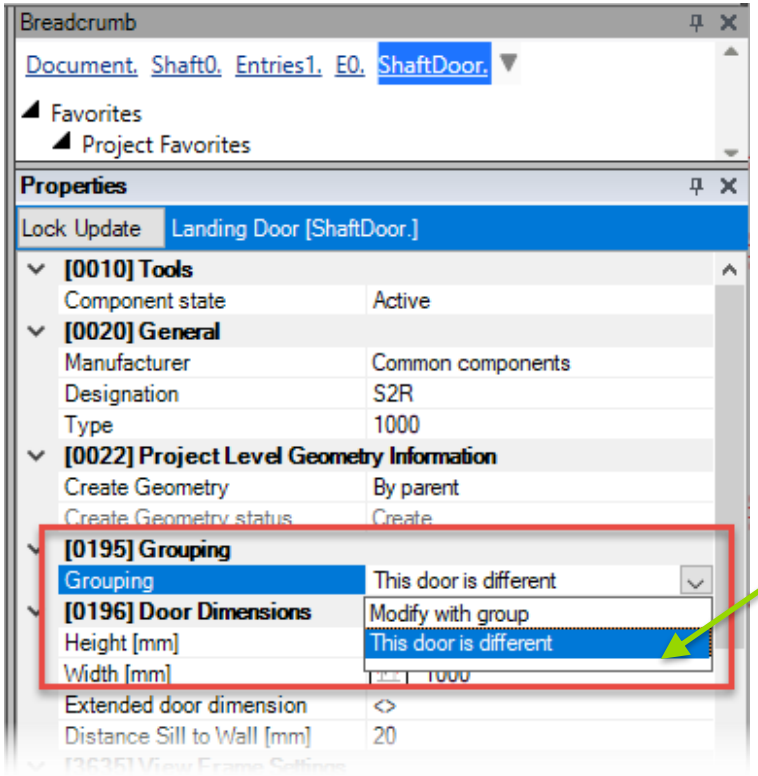


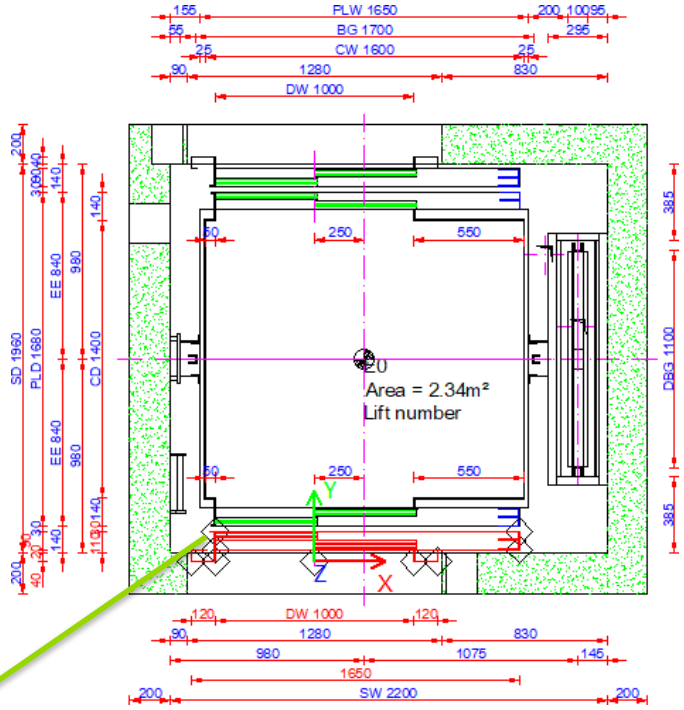
When exchanging e.g. the landing door, the program will ask you to automatically exchange the car door as well.

The door will be exchanged on all floors at the current wall.

Program Basics – BIM Components

- Individual exchanging (list components)
  - Via the component Grouping property
  - The selected door gets exchanged only

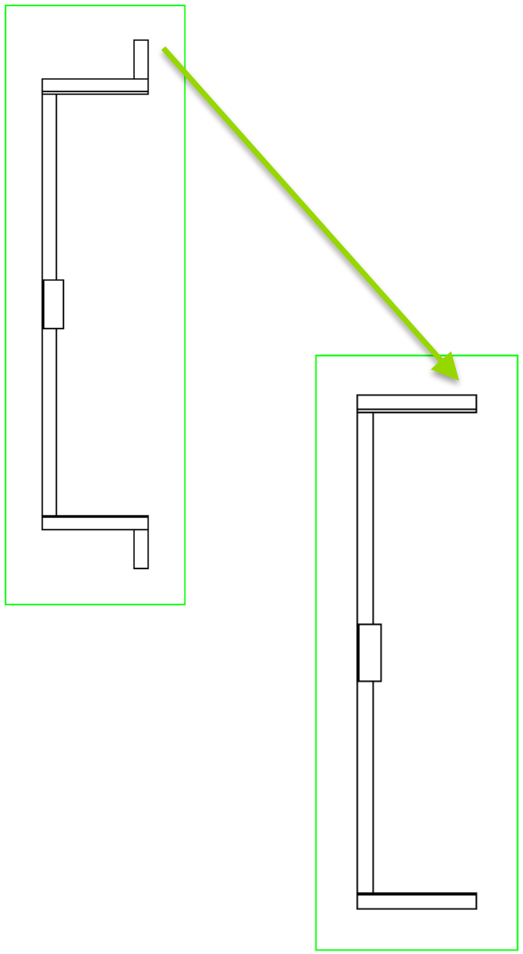




The **Grouping** property is available for most of the list object items.

Program Basics - Product Options

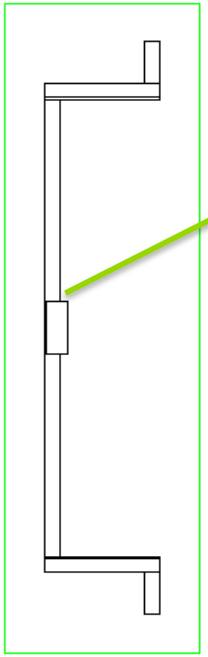
- Are available by default for some of the DigiPara Liftdesigner BIM components
- E.g. for:
  - Rail brackets
  - Traction machines
  - Gear frames
  - Car frames
  - Etc.

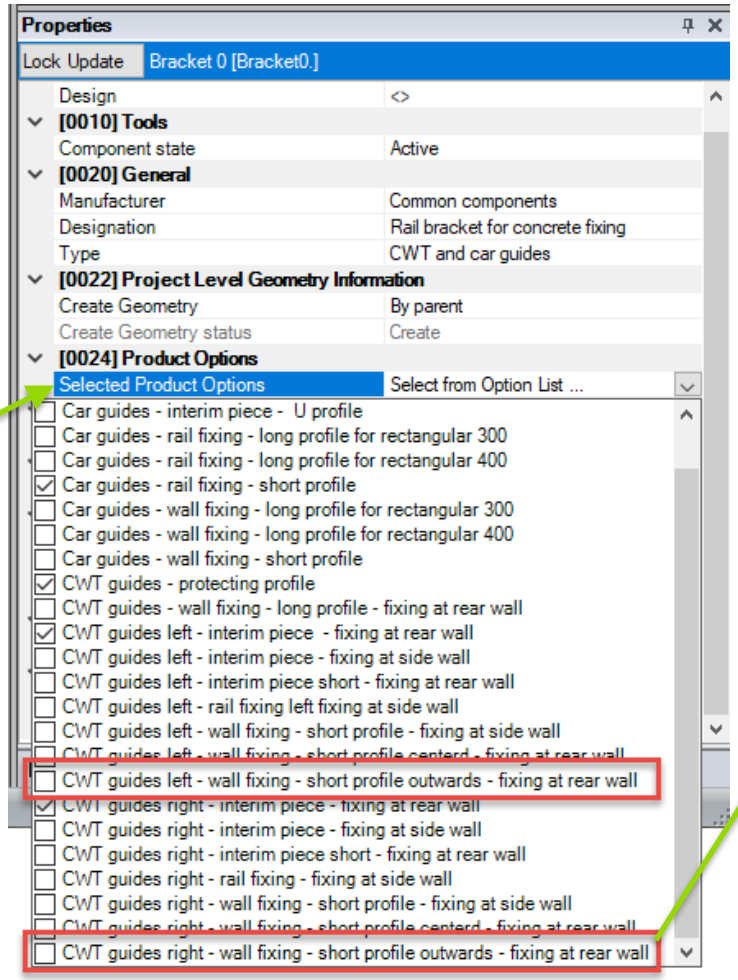


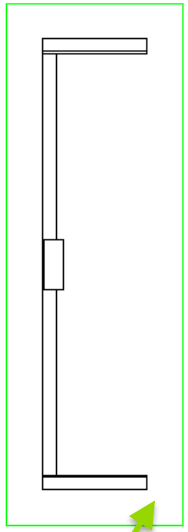
Program Basics - Product Options

- Enabling and disabling:
  - Via property → Selected Product Options
  - Product Options can consist of one or more profiles

Switching off the rail bracket wall fixing profiles.







Program Basics

Dimensions

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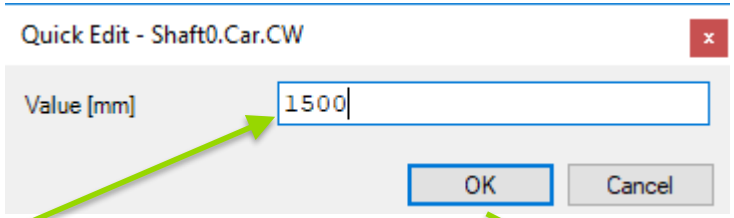
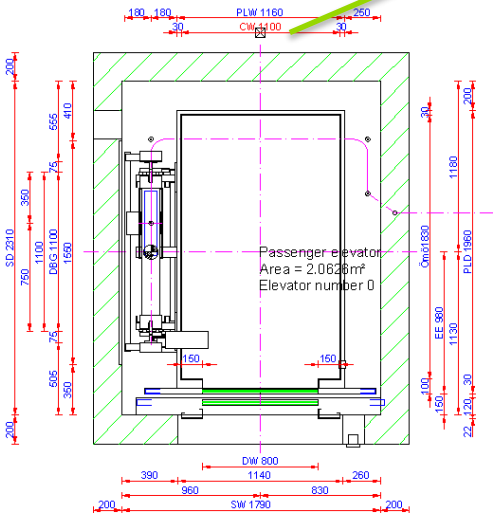
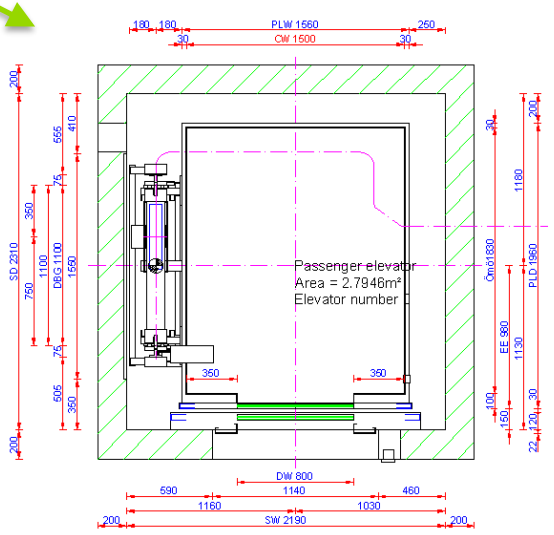
Program Basics - Dimensions

- Editing a dimension value in DigiPara Liftdesigner changes the 3D BIM model



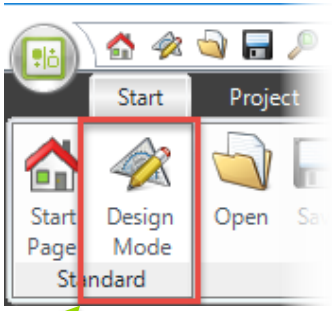


by e.g. changing the car width

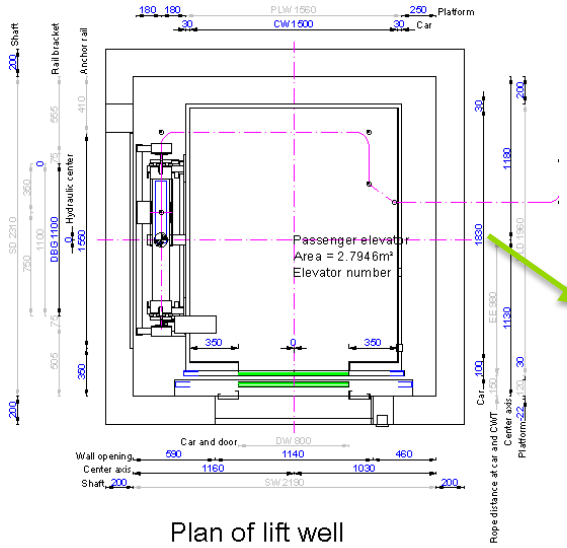


Program Basics - Dimensions

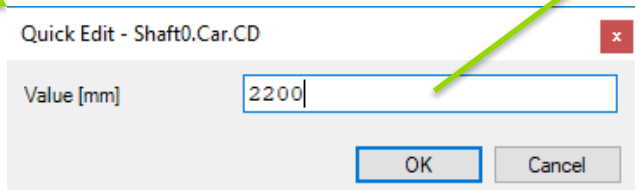
- Can be changed via the dimension properties or by double clicking on it
  - Only dimensions with a blue dimension text can be edited

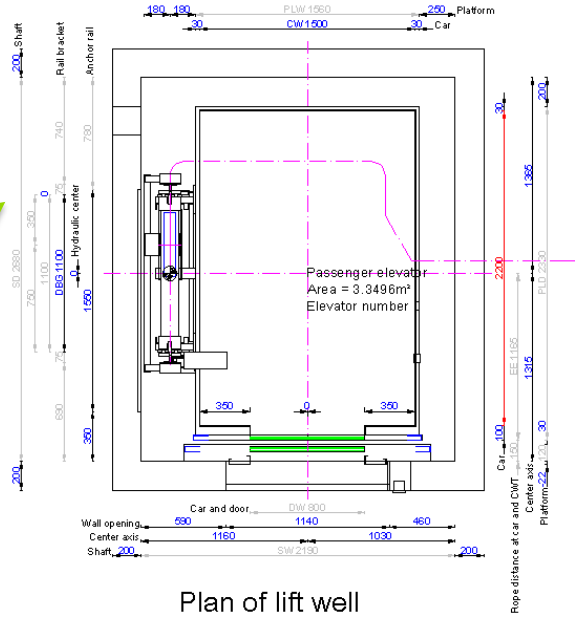


Changing dimension values in **Design Mode** (hatches turned off)



Plan of lift well
Scale: 1:20

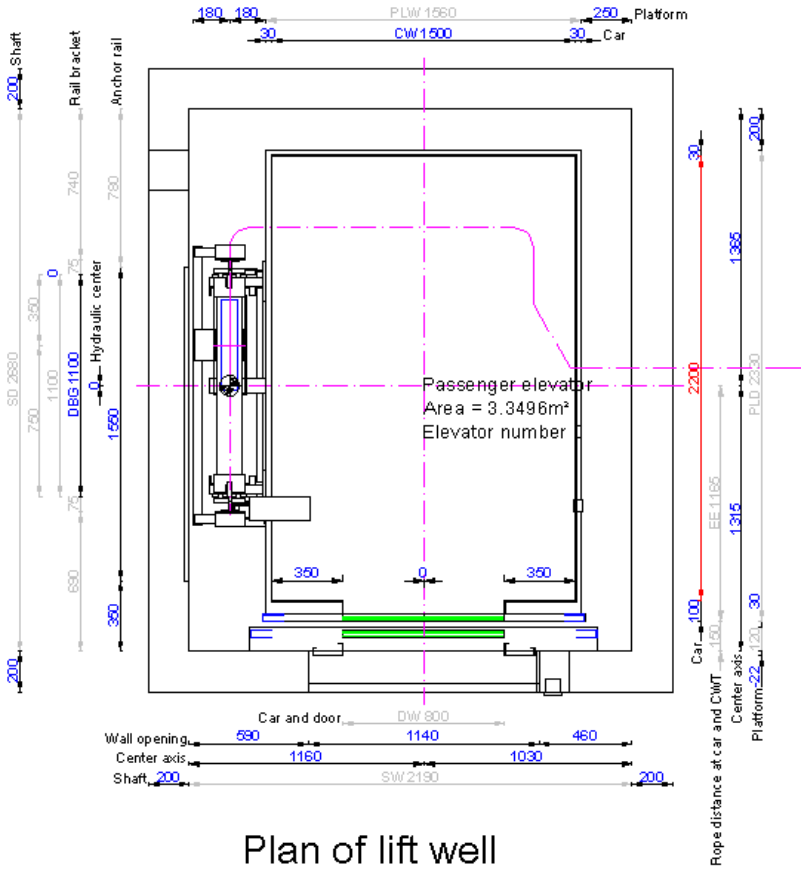




Plan of lift well
Scale: 1:20

Program Basics - Dimensions

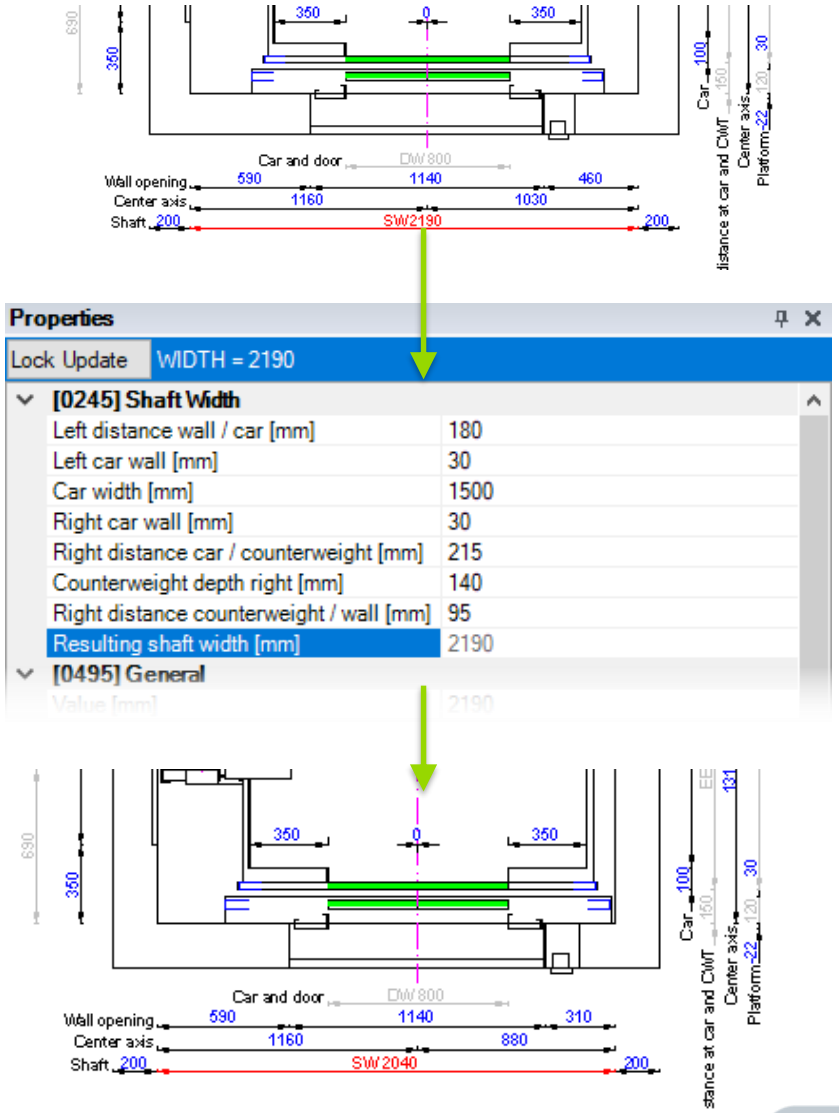
- Resulting or grayed out dimension can not be edited
- Only some special dimensions like e.g. the SW and the SD can be changed indirectly



Plan of lift well
Scale: 1:20

Program Basics - Dimensions

- Chain dimensions
  - Like the shaft width (SW) and depth (SD) consist of a chain of dimensions
  - The values, these dimensions consist of, can be changed via the Properties docking window



Practice - BIM Components & Dimensions

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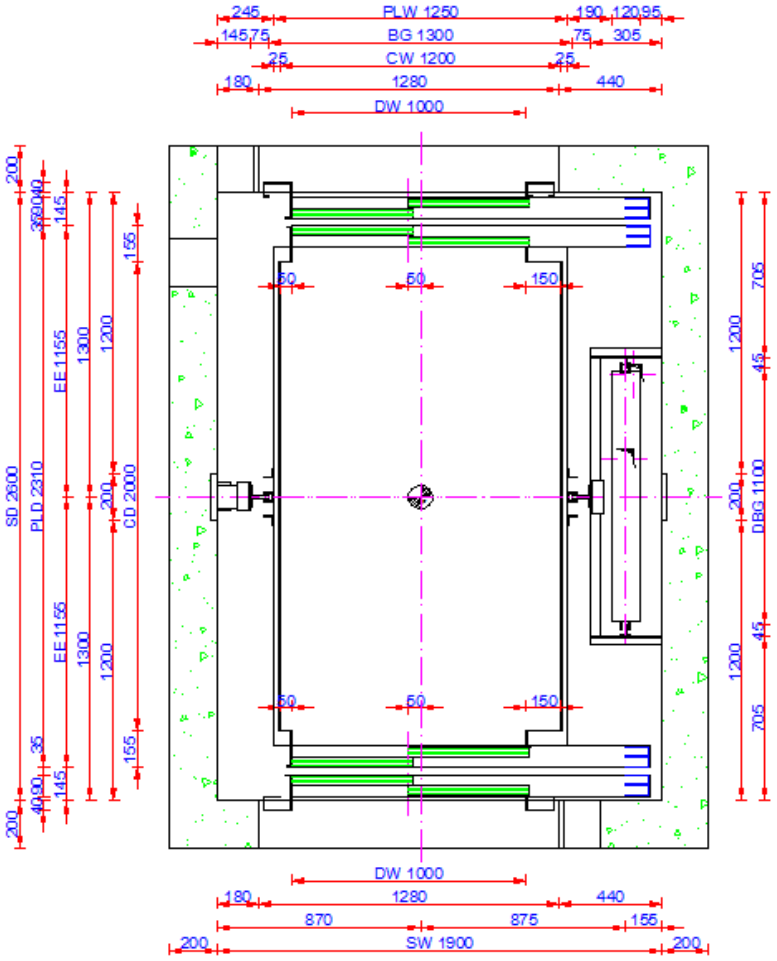
- In the **LDTrainingSample.ld3** project file, switch to the **My Views** sheet and change the following dimension values:
  - SD: 2600 mm
  - SW: 1900 mm
  - CD: 2000 mm
  - CW: 1200 mm

- Change the following BIM Component and Product Options:
  - Counterweight Rail Brackets :
    - Change the type to Common Components -> Rail Bracket for Car and CWT - side drop -> CWT and car guides -> Railbracket for concrete fixing
  - Product Options:
    - Disable the **wall fixing - short profile outwards - fixing at rear wall** items on the left and right side of the bracket

Practice - BIM Components & Dimensions

- Save the project
- The Plan View should now look as follows:



Plan
Scale: 1:20

Program Basics

Annotations

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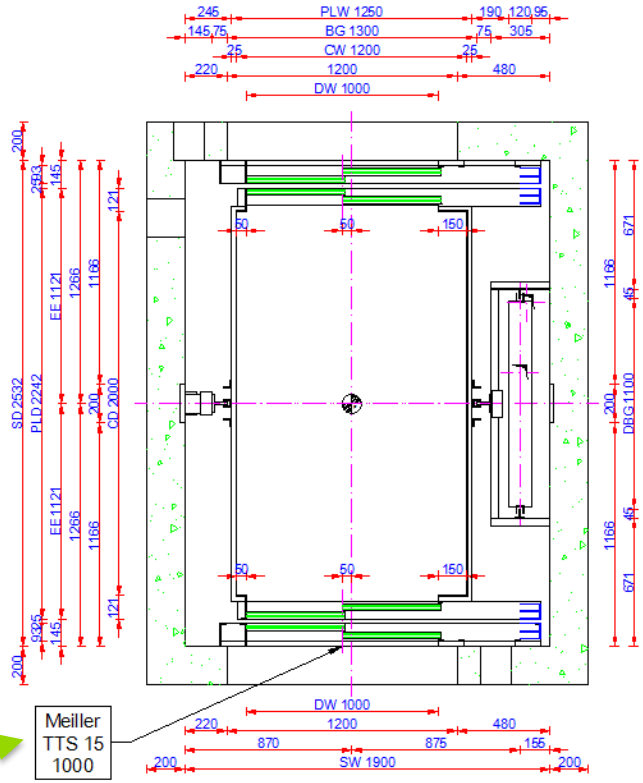
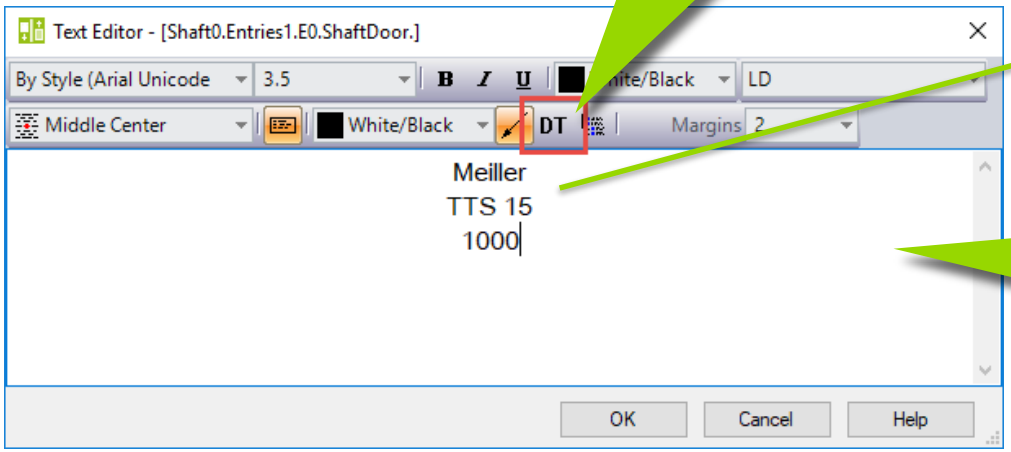
Program Basics - Annotations

- Can be created on a view frame or on a component basis
  - Existing annotations can be edited by simply double clicking on it



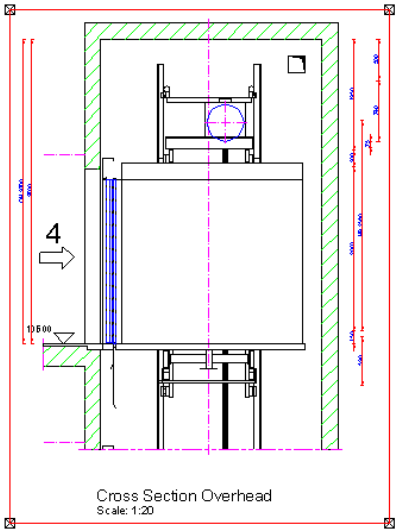
Plan
Scale: 1:20

The DT button, adds the default text for the component / view frame



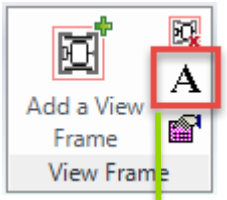
Component & view frame annotations can be added and edited via the DigiPara Liftdesigner text Editor dialog

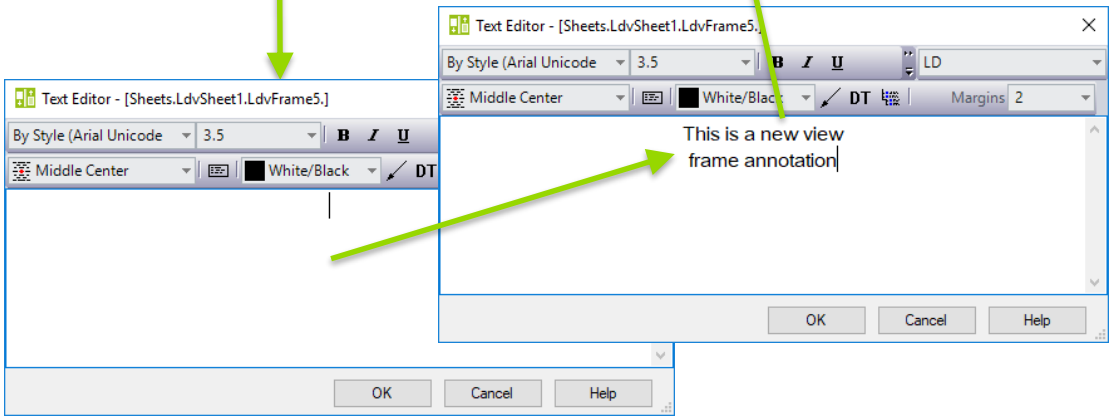
- Creating a view frame related annotation



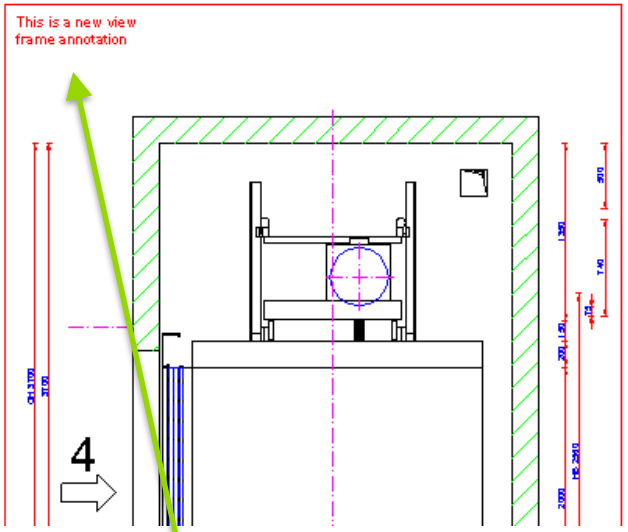
1. Selecting a view frame first

2. Adding an annotation via the text editor dialog



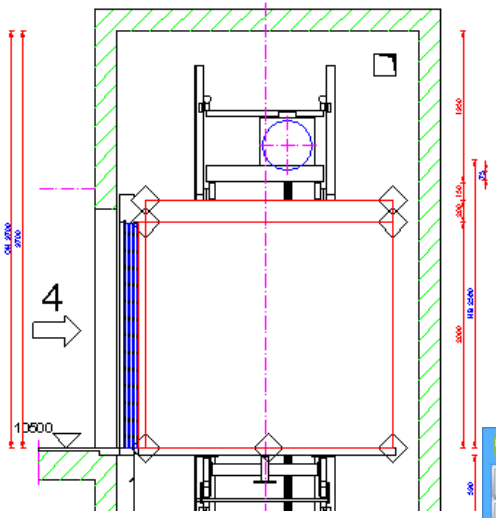


3. The annotation gets displayed in the view frame



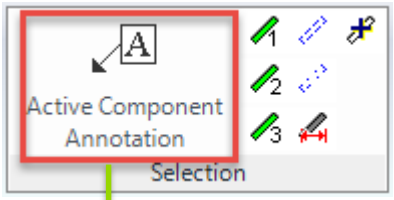
Program Basics - Annotations

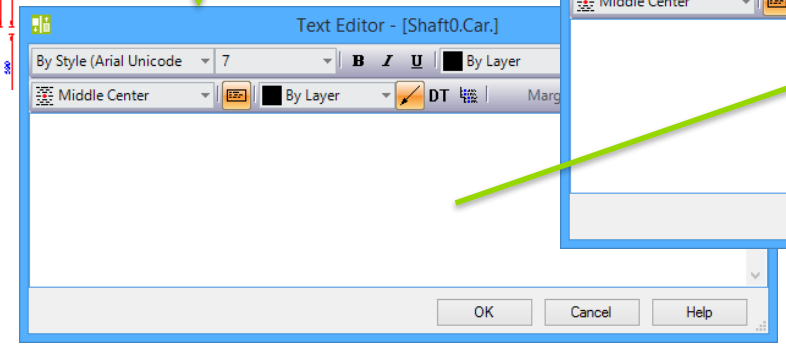
- Creating a component related annotation



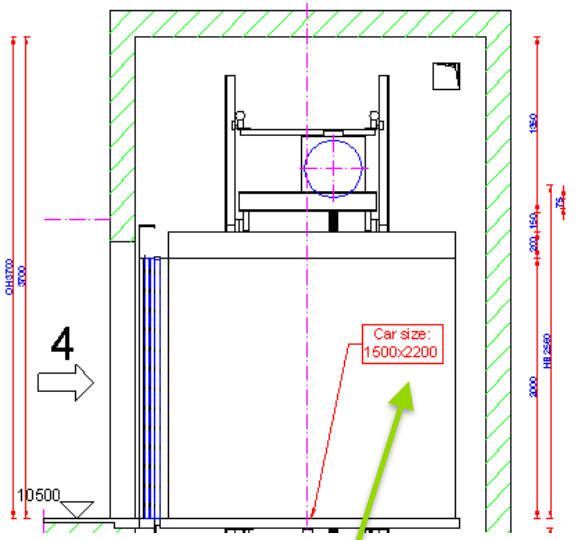
1. Selecting the component

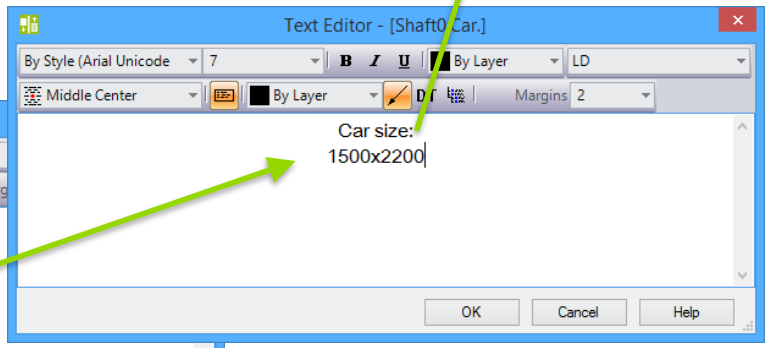
2. Adding a component annotation via the Text Editor dialog





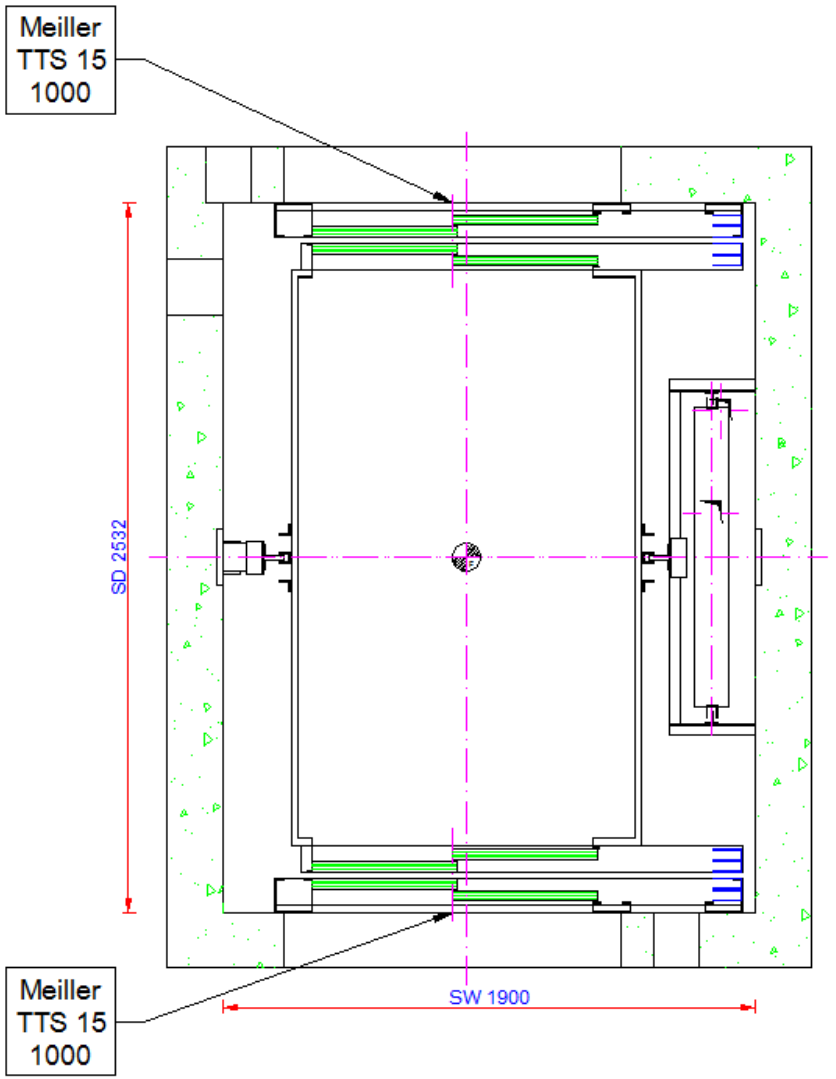
3. The new component annotation gets displayed in the view frame





Practice - Annotations

- Add a component annotation to the front and rear shaft door of the plan view:
  - Text height 3.5
- Save the project



Program Basics

Special View Types

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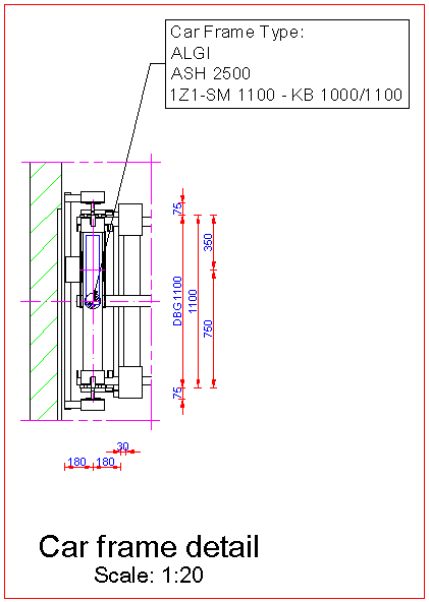
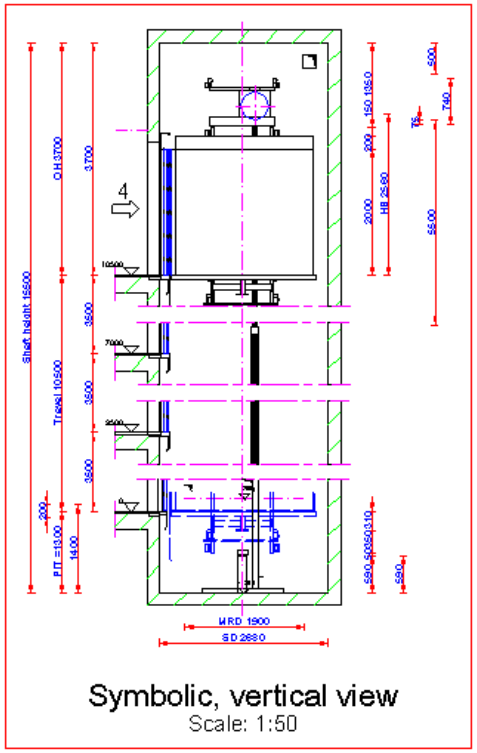
Program Basics - Special View Types

- Detail section
- Symbolic, vertical sections

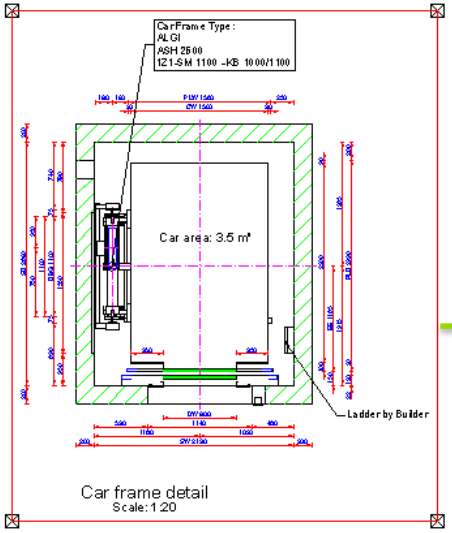


Car frame detail
Scale: 1:20



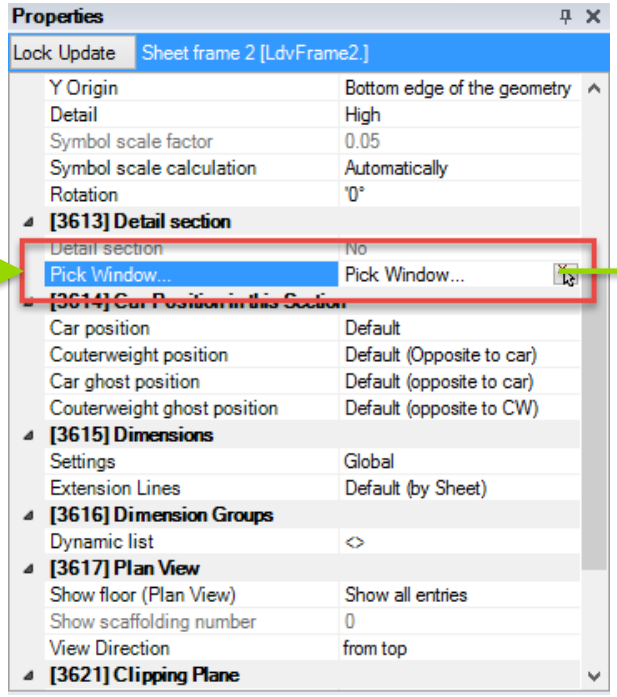
Symbolic, vertical view
Scale: 1:50

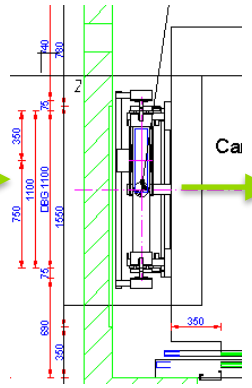
Special View Types - Detail Section

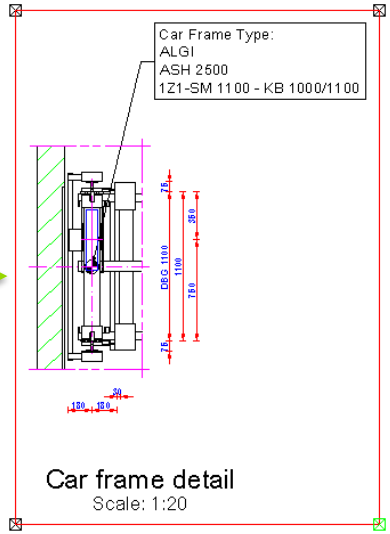


1. Selecting a view first

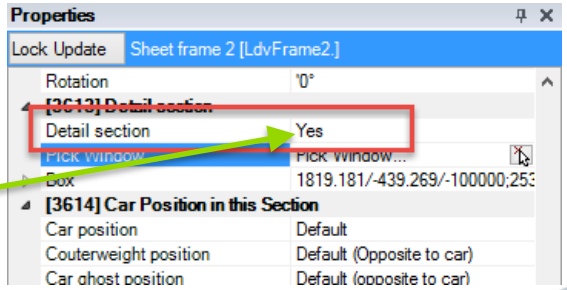
2. Specifying the section via the view frame **Pick Window** property







Note: The detail section mode can be reset via the view frame **Detail section** property



Special View Types - Symbolic Vertical Section

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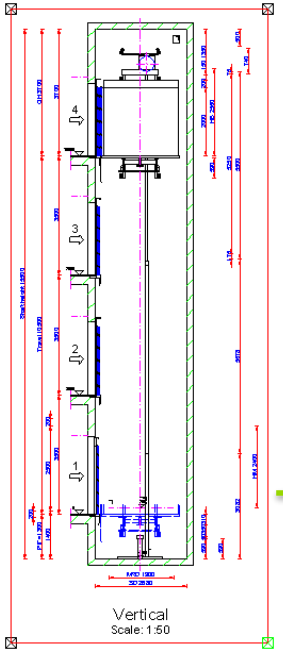
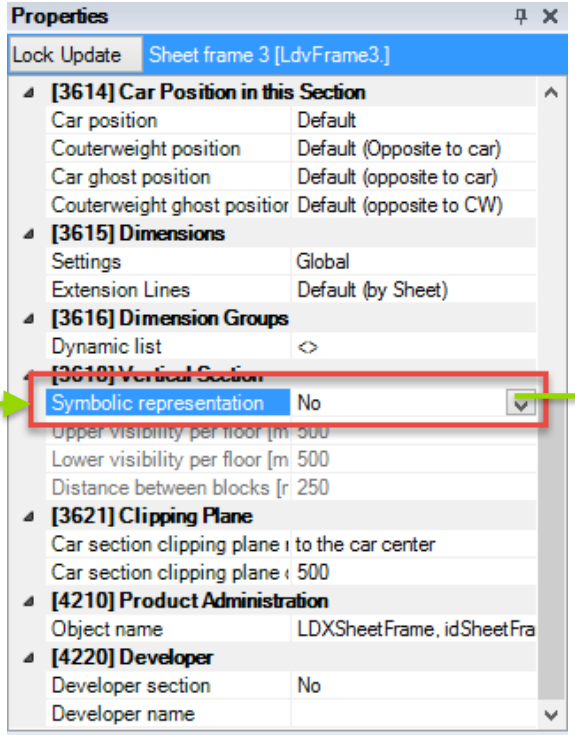
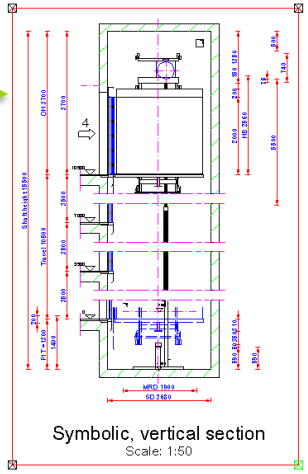
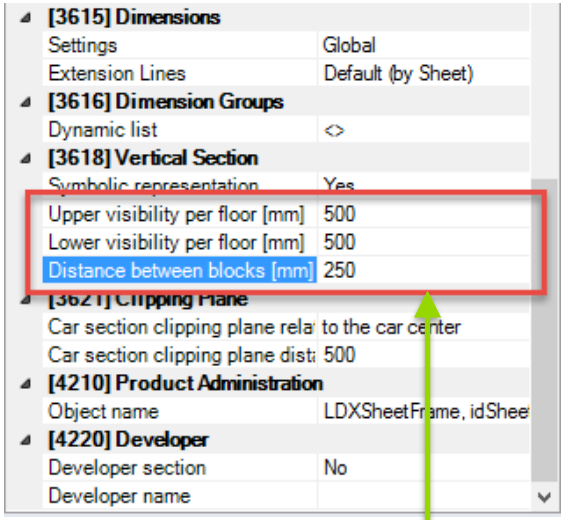


1. Selecting a vertical view first

2. Changing the value of the view frame **Symbolic representation** property to **Yes**



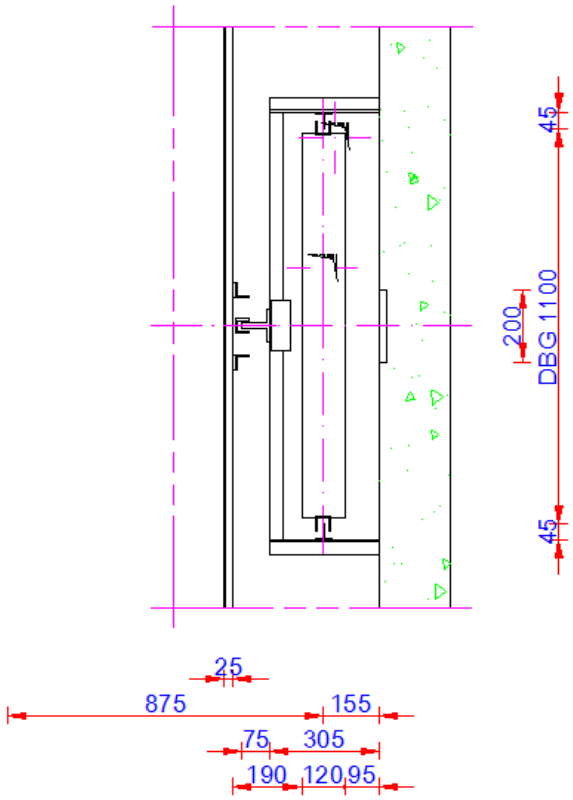




Changing the **Upper** and **Lower** visibility per floor and the distance btw. the vertical section blocks

Practice - Special View Types

- Add a rail bracket detail section to the My Views sheet
  - Copy the existing plan view
  - Create the detail section
  - Change the view description
- Save the project



Rail Bracket Detail
Scale: 1:20

Level of Development - LOD

General

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LOD - General

- LOD – Level of Development

LOD 100

Very early stage of planning

LOD 200

Information about stops and height

Overall dimensions of cabin and door required

LOD 300

Choose and place manufacturer products

LOD 350

Supplier specific information

Select elevator supplier

LOD 400

All connections, brackets u.a. complementary components

LOD 500

The model elements are a verified representation in terms of size, shape, location, quantity and orientation

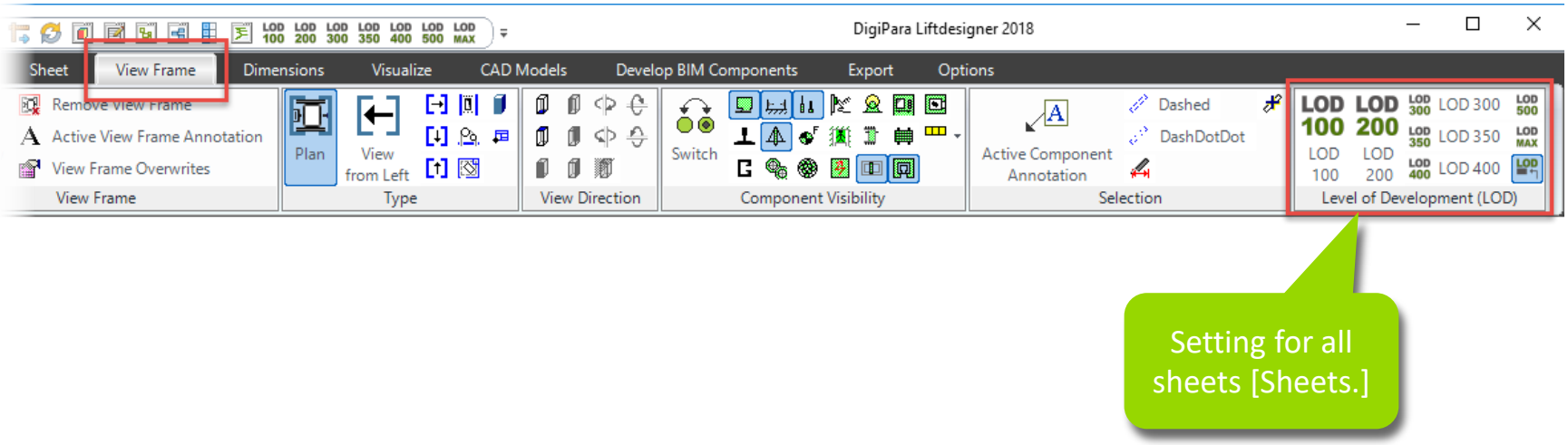
LOD MAX

No official LOD level!

Model with maximum details for the DigiPara BIM exchange

LOD - General

- The LOD (Level of Development) for the entire project, including all view frames, is set under the View Frame tab:



Level of Development - LOD

Individual Settings

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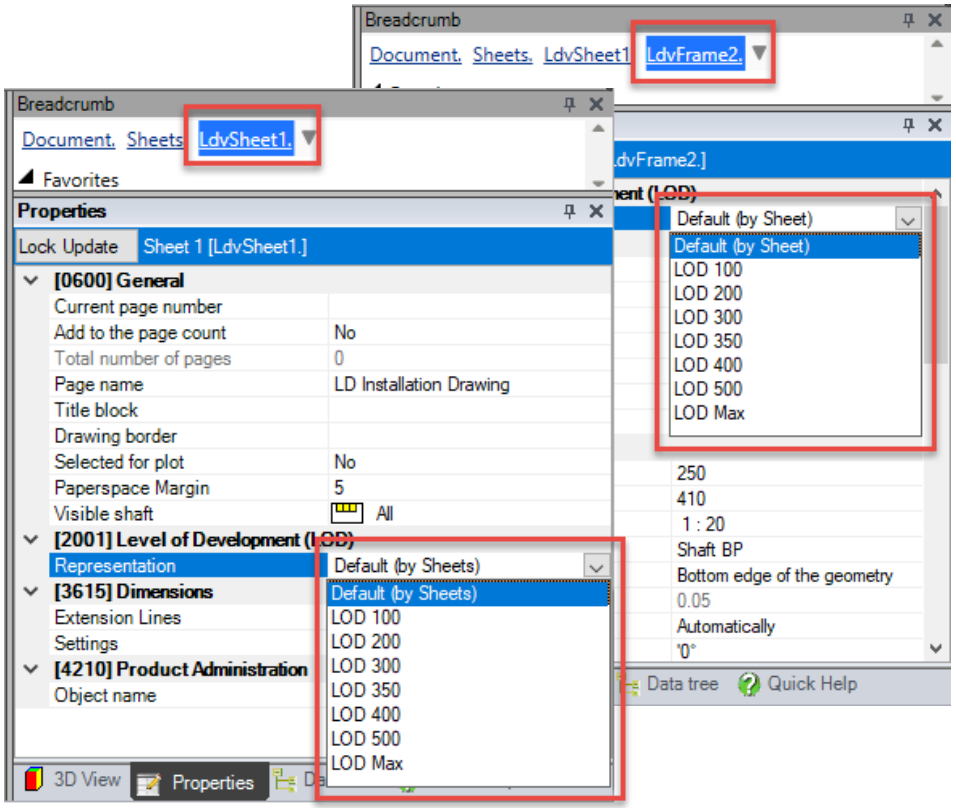
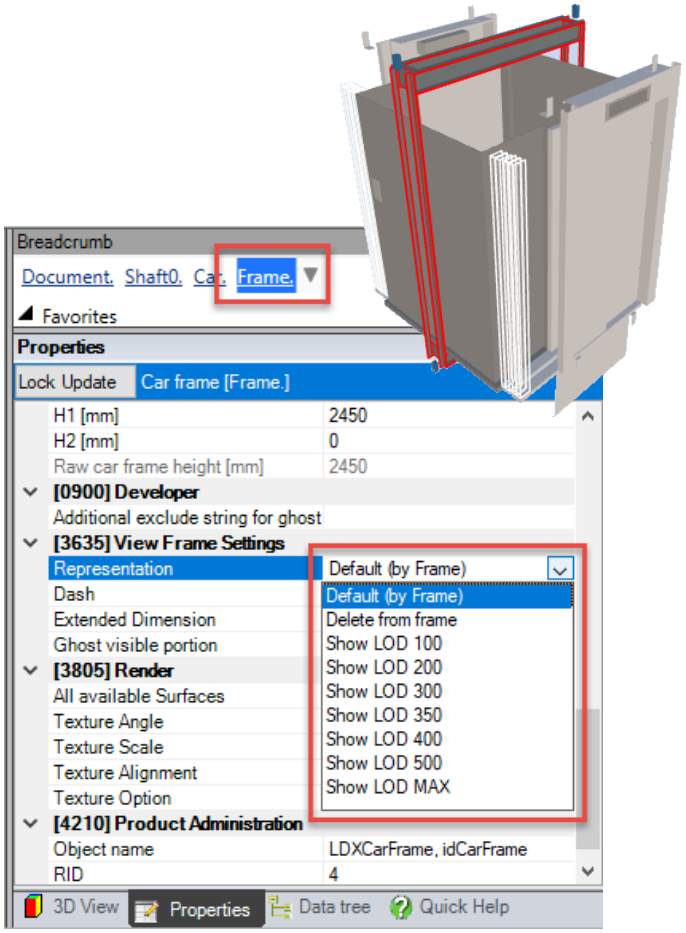
LOD – Individual Settings

- Individual LOD settings can be defined for every:
  - single Sheet [LdvSheet*.]
  - single View Frame[LdvFrame*.]
  - single BIM Components or list objects





2D Drawing Export

General

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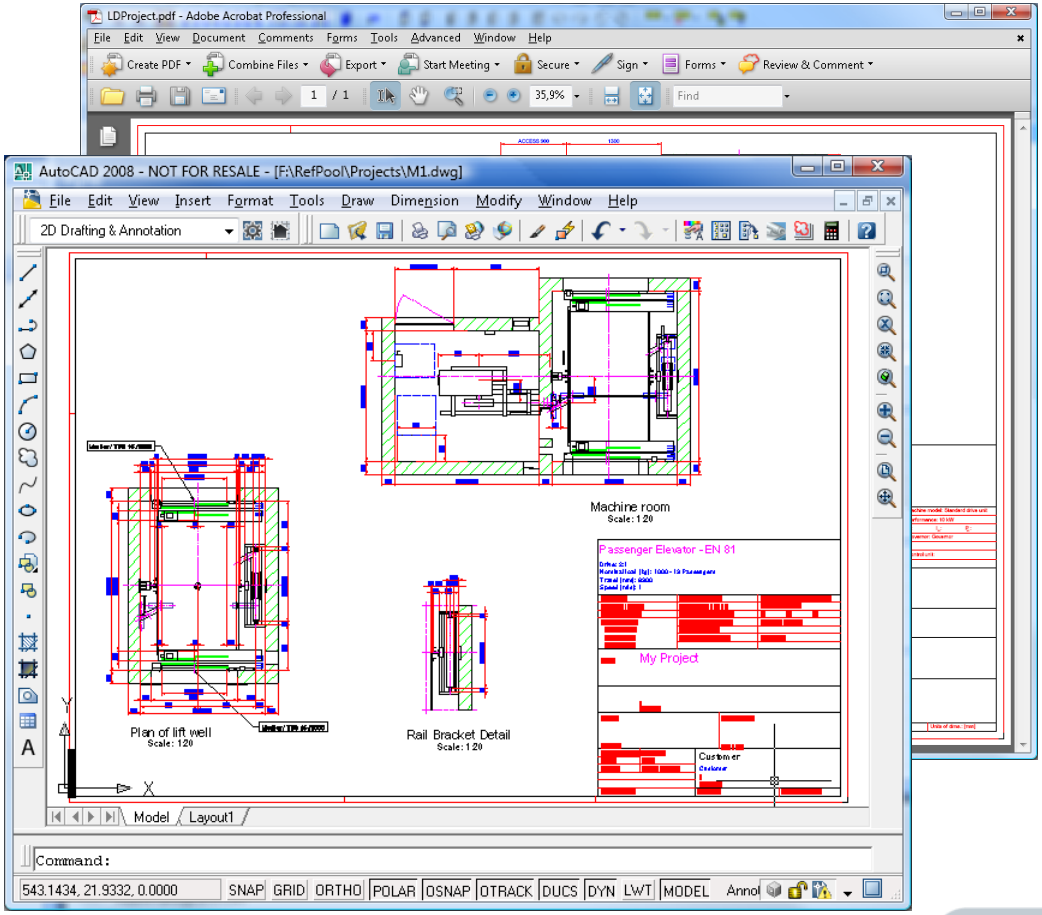
2D Drawing Export - General

- DigiPara Liftdesigner supports e.g. the following 2D drawing output formats:
  - DWG
  - PDF
  - Etc.



2D Drawing Export

PDF & DWG

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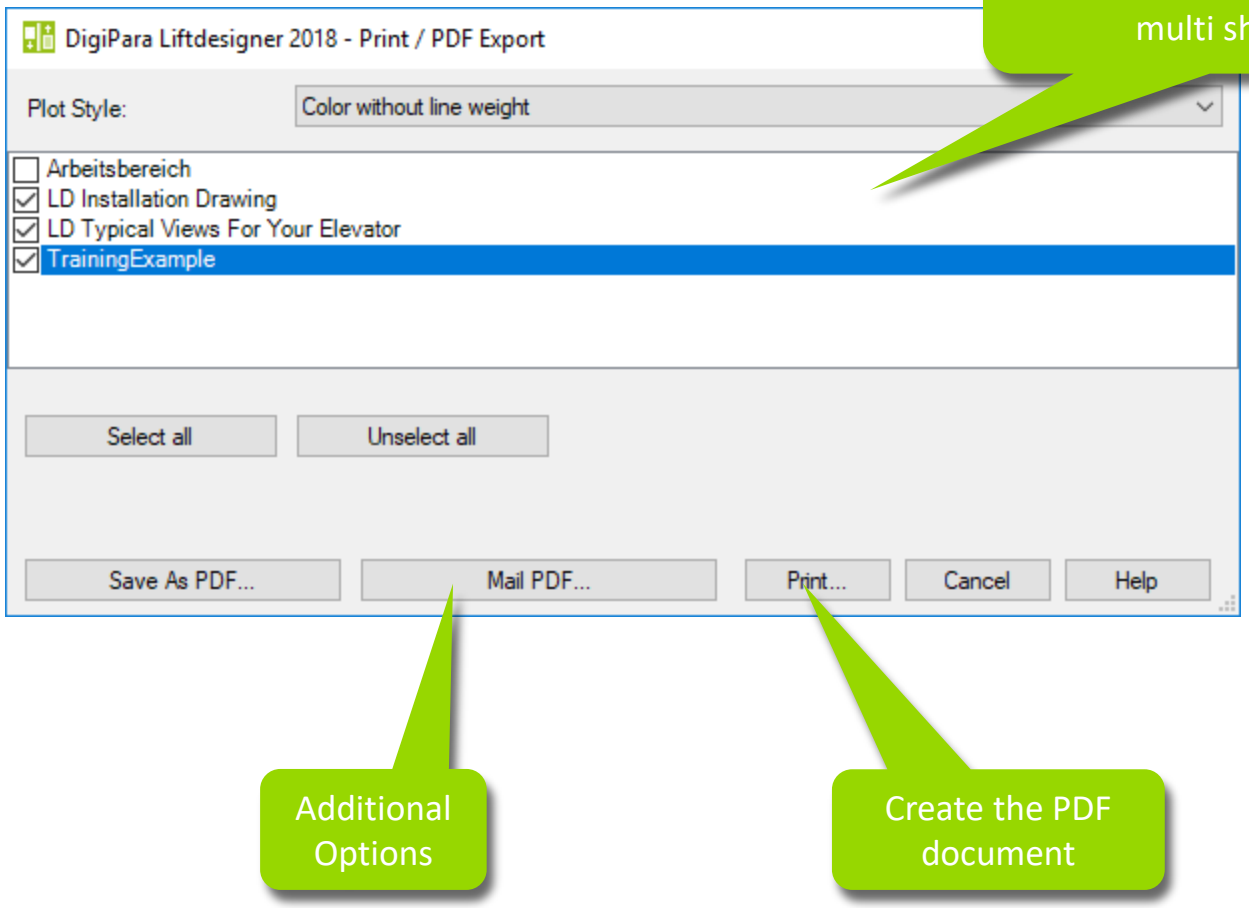
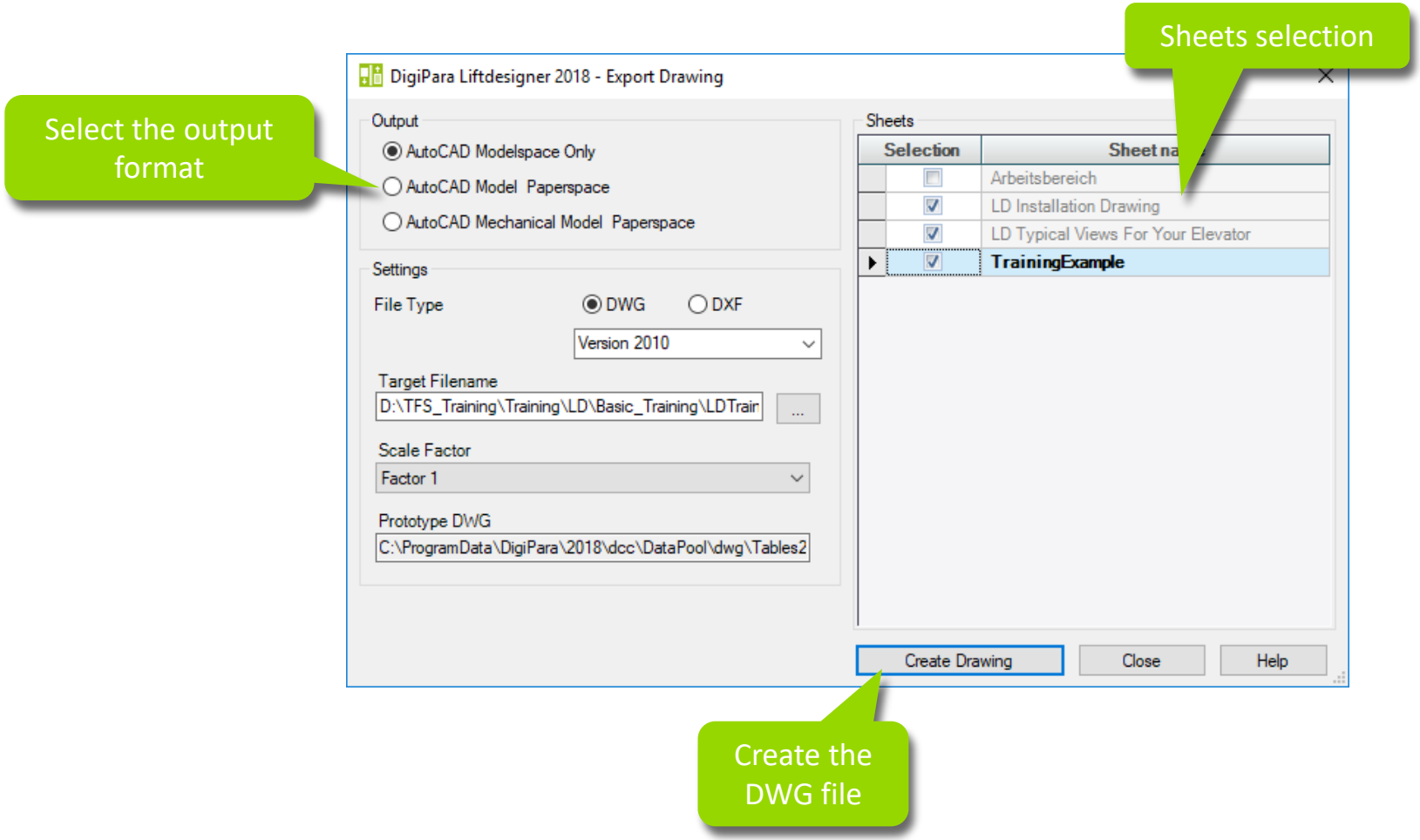
2D Drawing Export - PDF

- Via the **Export PDF** dialog



2D Drawing Export - DWG

- Via the **Export Drawing** dialog



Practice - 2D Drawing Export

- Export the **My Views** sheet, added to the **LDTrainingSample.ld3** project before, to Autocad, using the **Model-/ Paper space** output option.

Dimensions

General

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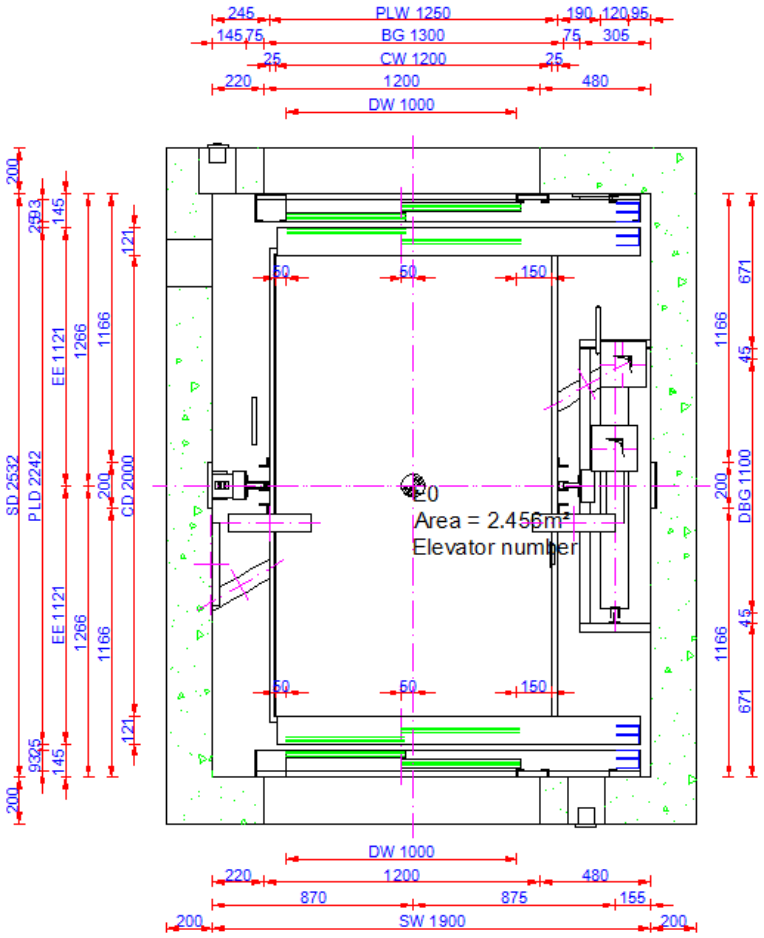
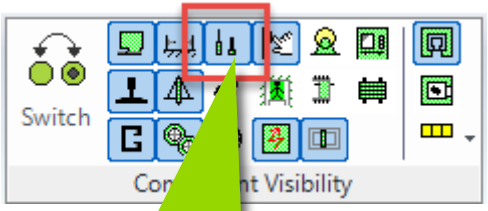
Dimensions - General

- Standard view frame dimensions
  - Dimension which are displayed by default in a new view frame
- Extended component dimensions



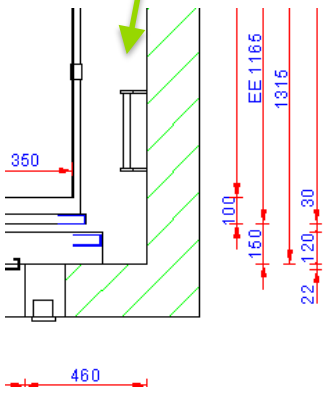
Dimensions - General

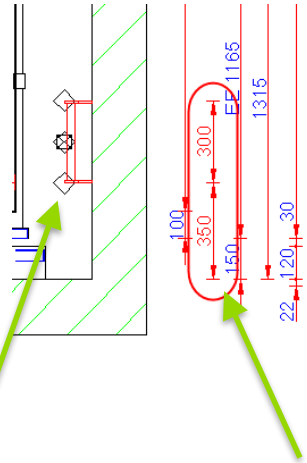
- Extended component dimensions
  - Are displayed temporarily when selecting a component
  - Can be made visible permanently via the Show Extended Component Dimensions item in the View frame tab → Selection group



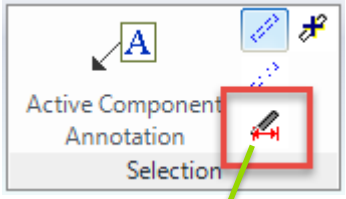
Dimension visibility for pit components needs to be on.

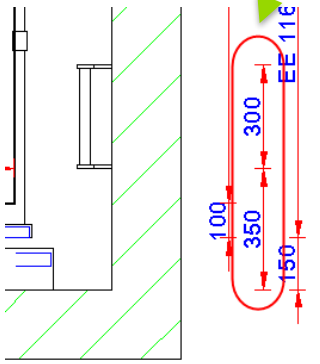
Extended pit ladder dimensions





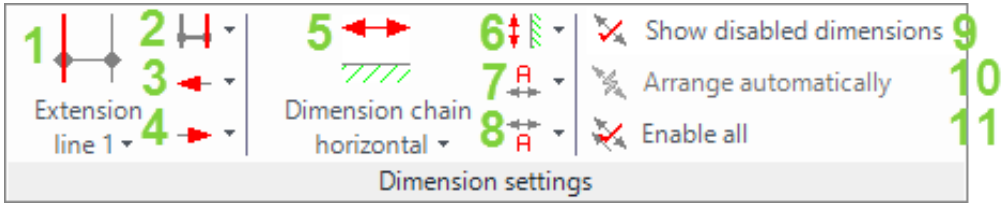
Activating extended component dimensions by clicking on the corresponding component





Dimensions - General

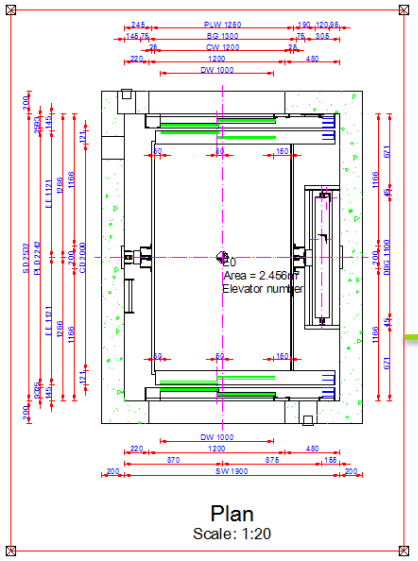
- Dimension settings
  - Provides dimension layout specific operations

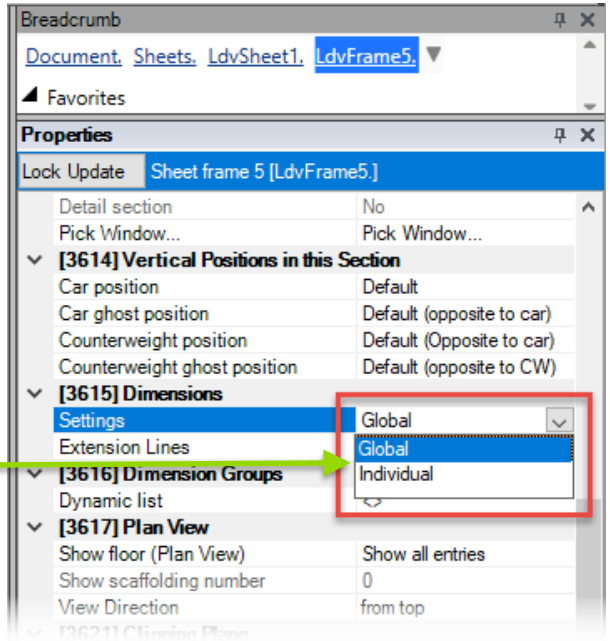


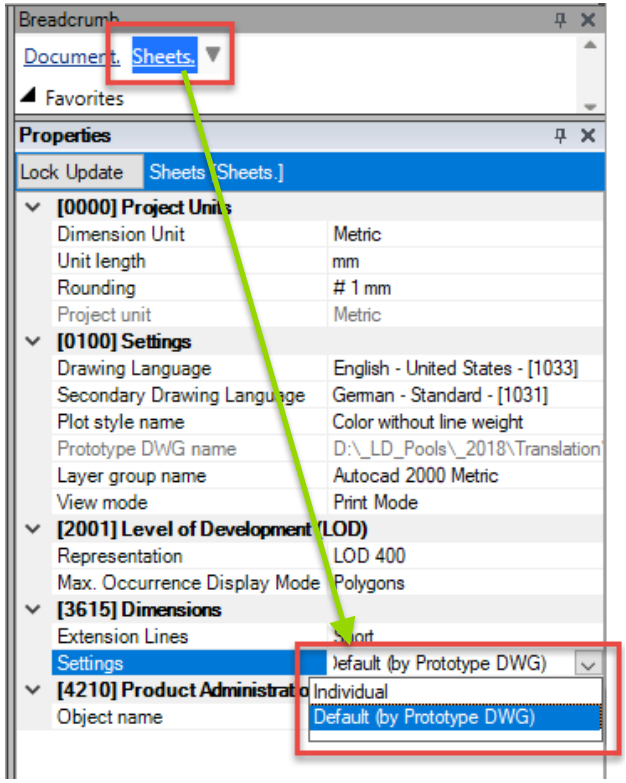
1. **Change the first dimension extension line**
2. **Change the first dimension extension line**
3. **Change the first arrowhead symbol**
4. **Change the second arrowhead symbol**
5. **Change the vertical position of the selected**
6. **Change the horizontal position of the selected dimension / dimensions**
7. **Change the horizontal dimension text position**
8. **Change the vertical dimension text position**
9. **Show disabled / switched off dimensions**
10. **Reset the selected dimension arrangement**
11. **Activate all dimensions**

Dimensions - General

- Dimension text heights and dimension chain distances can be edited via the properties of
  - the selected view frame
  - or sheets



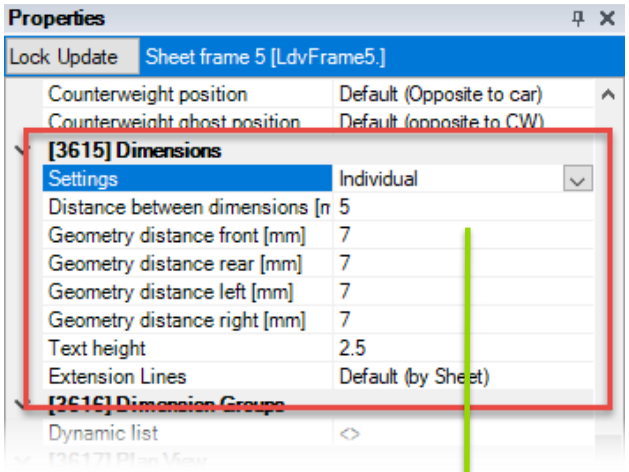


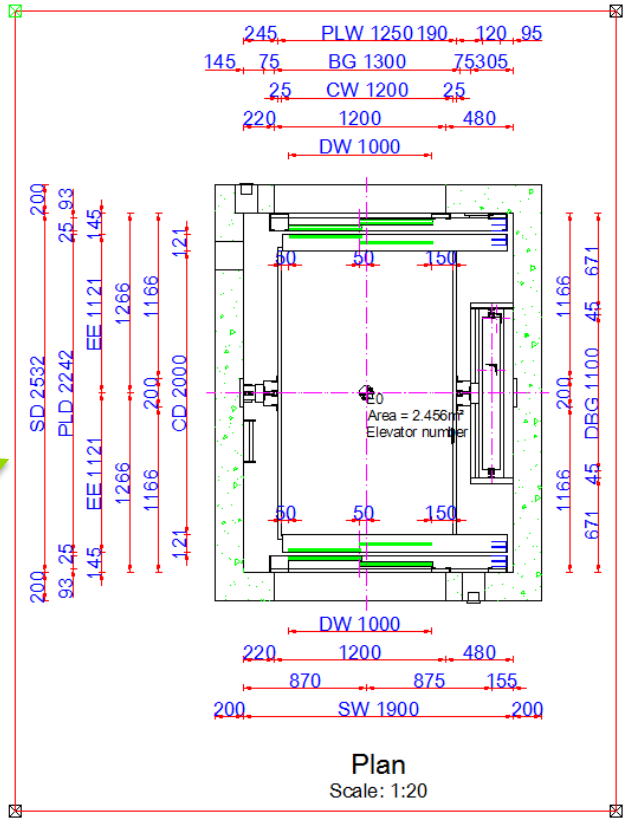


Switching the **Dimensions** → **Settings** property value into **Individual** first

Dimensions - General

- Dimension text heights and dimension chain distances
  - Adapting the values via the corresponding properties





Dimensions

Properties

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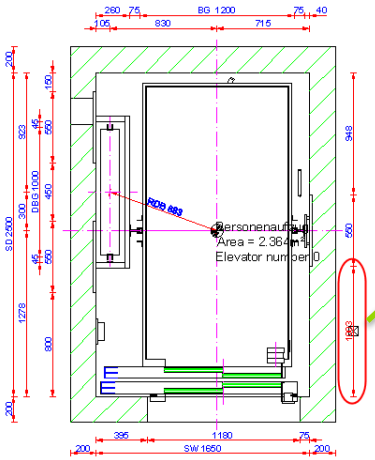
Dimension - Properties

- Are displayed by clicking on a dimension in the drawing

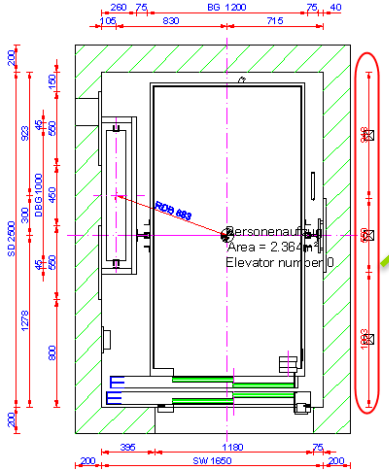


Properties

Lock Update | AR_WALL_DIST = 1002.5

[0495] General	
Value [mm]	1002.5
[3635] View Frame Settings	
Dimension-ID	184
Prefix (related to frame)	
Dimension chain	Automatically
Dimension chain Left / Right	Automatically
Enabled	Yes
Dimension Text hor.	Centered
Dimension Text ver.	Default
Extension line 1st	Default (by Frame)
Extension line 2nd	Default (by Frame)
Arrowhead 1st	ByDimstyle (LIFT)
Arrowhead 2nd	ByDimstyle (LIFT)
Additional dimension display options	Default
Move	0/0/0

- When selecting more then one dimensions, only layout specific properties will be displayed



Properties

Lock Update | Multi selection (3)

Misc	
Dimension-ID	184
Dimension Group	0
Prefix	
Prefix (related to frame)	
Dimension chain description	
Dimension chain	Automatically
Dimension chain Left / Right	Automatically
Enabled	Yes
Dimension Text hor.	Centered
Dimension Text ver.	Default
Extension line 1st	Default (by Frame)
Extension line 2nd	Default (by Frame)
Arrowhead 1st	ByDimstyle (LIFT)
Arrowhead 2nd	ByDimstyle (LIFT)
Additional dimension display options	
Move	

Dimension - Properties

- The dimension alignment is determined by dimension ID’s

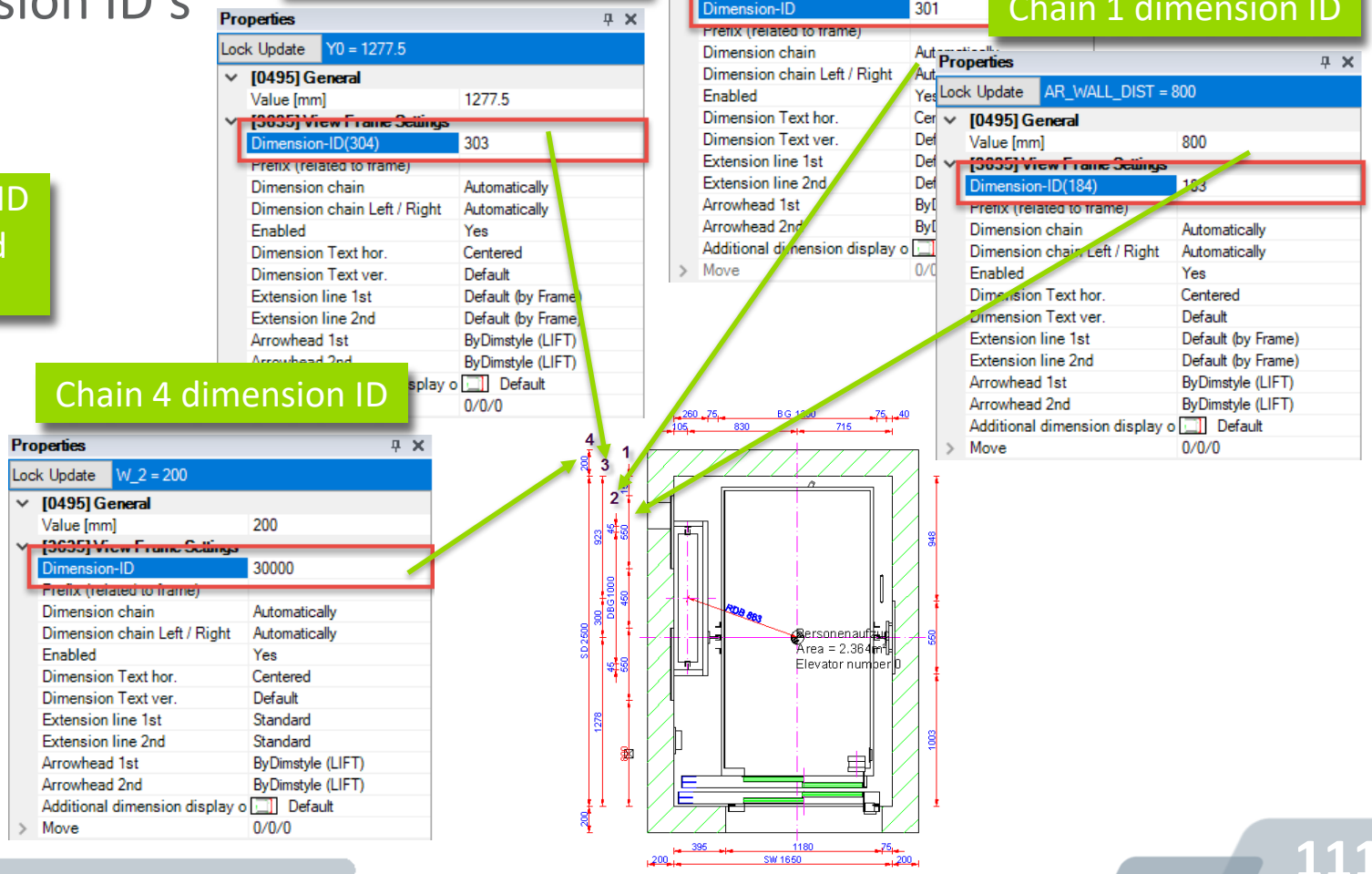
Each dimension ID can be changed individually

Chain 2 dimension ID

Chain 3 dimension ID

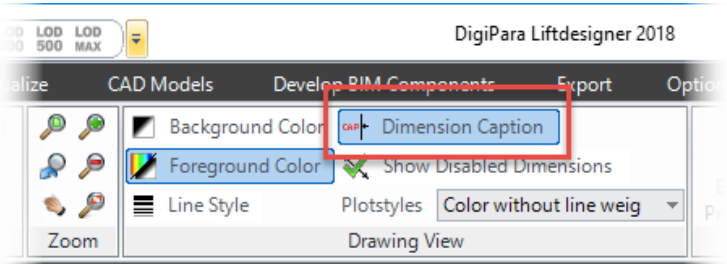
Chain 1 dimension ID

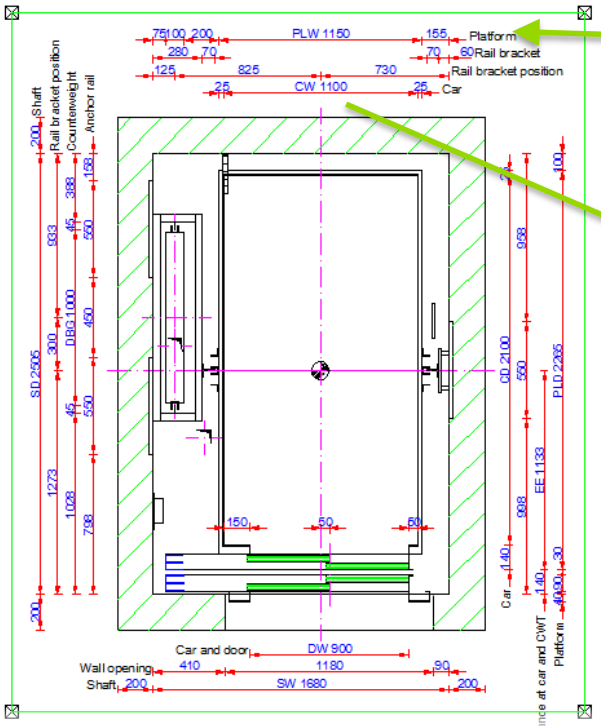
Chain 4 dimension ID



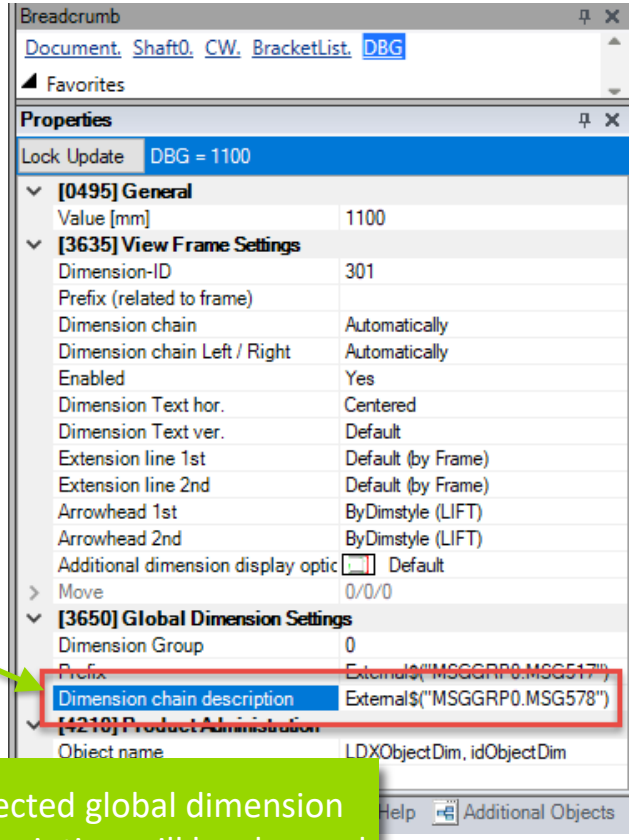
Dimension - Properties

- Dimension chain description





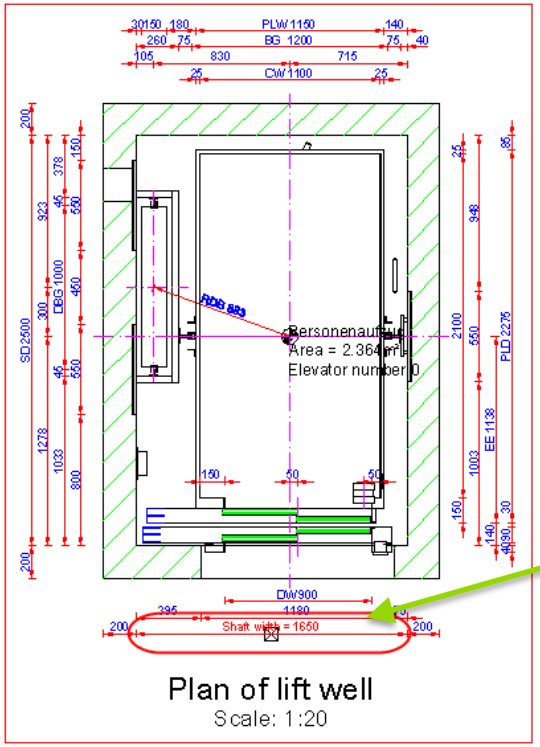
Dimension caption visible in the print mode.

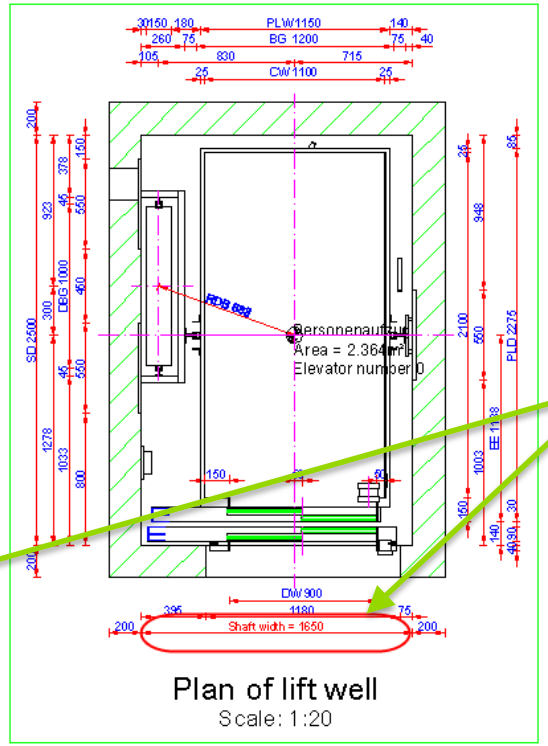


The selected global dimension chain description will be changed in all views and all other projects (new as well as old projects)

Dimension - Properties

- Adding or changing the global dimension prefix (not recommended)





Lock Update	WIDTH = 1650
Right distance counterweight / wal	140
Resulting shaft width [mm]	1650
[0495] General	
Value [mm]	1650
[3635] View Frame Settings	
Dimension-ID	30000
Prefix (related to frame)	
Dimension chain	Automatically
Dimension chain Left / Right	Automatically
Enabled	Yes
Dimension Text hor.	Centered
Dimension Text ver.	Default
Extension line 1st	Standard
Extension line 2nd	Standard
Arrowhead 1st	ByDimstyle (LIFT)
Arrowhead 2nd	ByDimstyle (LIFT)
Additional dimension display optio	Default
Move	0/0/0
[3650] Global Dimension Settings	
Dimension Group	0
Prefix	Shaft width =
Dimension chain description	External3("M3GGRP0.M3G576")
[4210] Product Administration	
Object name	LDXObjectDim, idObjectDim

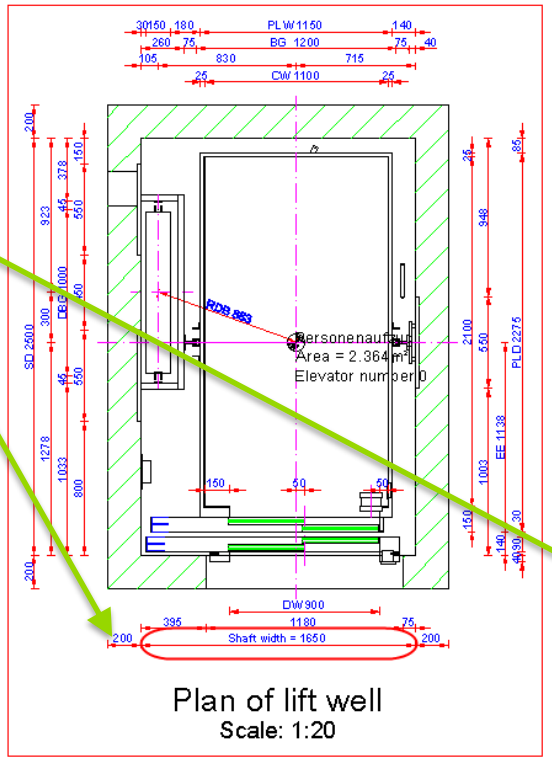
The selected global dimension prefix will be changed in all views and all other projects (new as well as old projects)

Dimension Properties

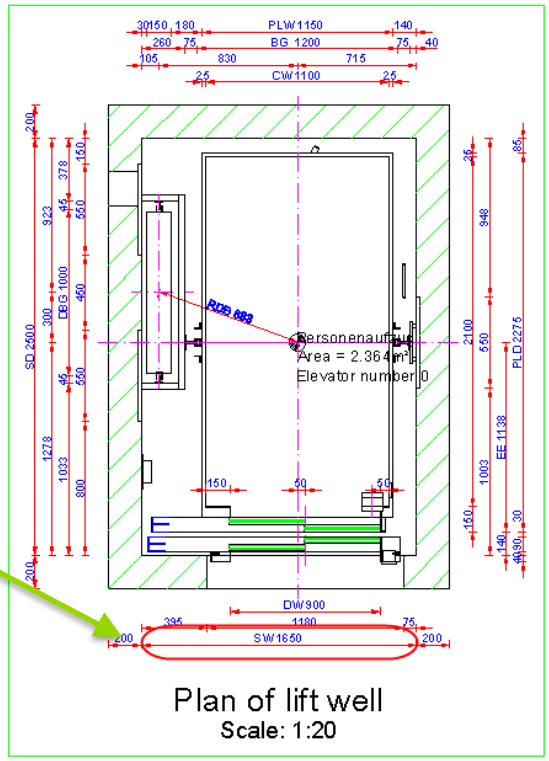
- Adding or changing the local, view frame related, dimension prefix (recommended)

Frame related prefixes affect the selected dimension in the current view frame only

Lock Update	WIDTH = 1650
Right distance counterweight / wal	140
Resulting shaft width [mm]	1650
[0495] General	
Value [mm]	1650
[3635] View Frame Settings	
Dimension ID	38888
Prefix (related to frame)	Shaft width =
Dimension chain	Automatically
Dimension chain Left / Right	Automatically
Enabled	Yes
Dimension Text hor.	Centered
Dimension Text ver.	Default
Extension line 1st	Standard
Extension line 2nd	Standard
Arrowhead 1st	ByDimstyle (LIFT)
Arrowhead 2nd	ByDimstyle (LIFT)
Additional dimension display optio	Default
Move	0/0/0
[3650] Global Dimension Settings	
Dimension Group	0
Prefix	External$("MSGGRP0.MSG518")
Dimension chain description	External$("MSGGRP0.MSG576")
[4210] Product Administration	
Object name	LDXObjectDim, idObjectDim



Plan of lift well
Scale: 1:20



Plan of lift well
Scale: 1:20

Dimension - Properties

- Special Prefix Options
  - Using a prefix and / or suffix:

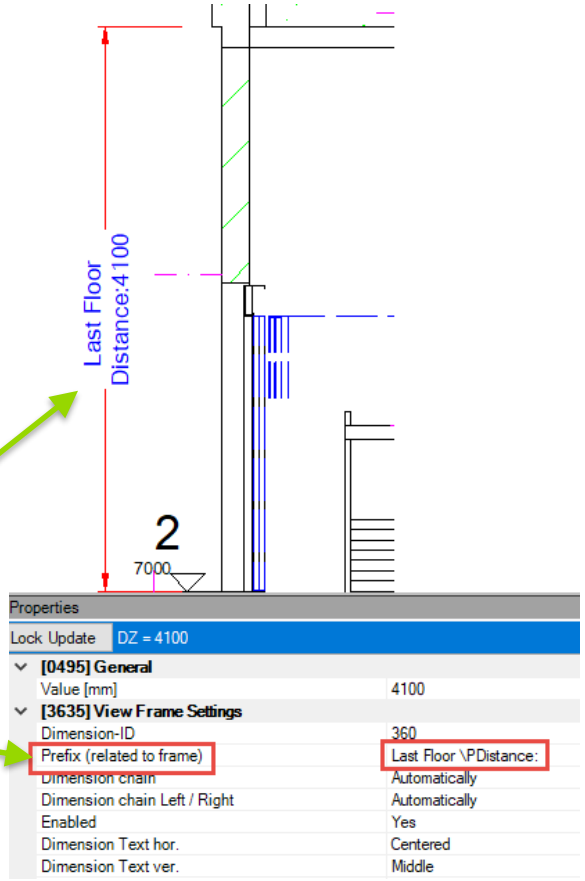
    Add the following sequence : Prefix **<>** Suffix

  - Hiding the dimension value:

    Add the prefix sequence: **<!>**

  - Add a row to the one under the other:

    Add between two the texts: **\P**

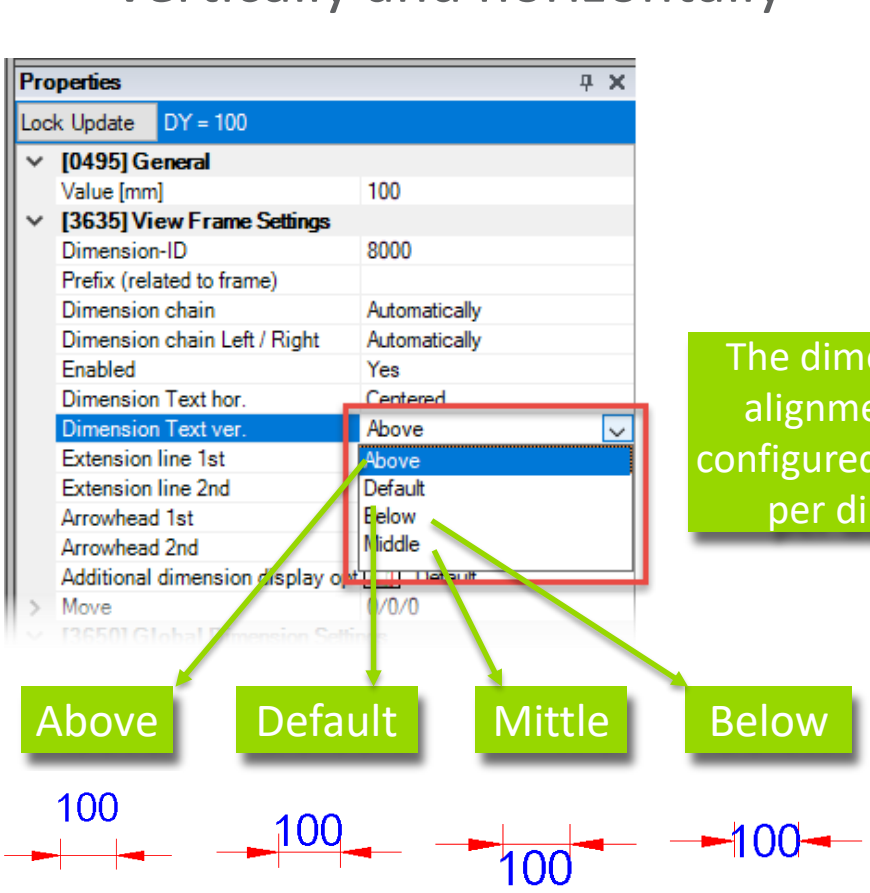


  - Replacing the dimension value with any other expression:

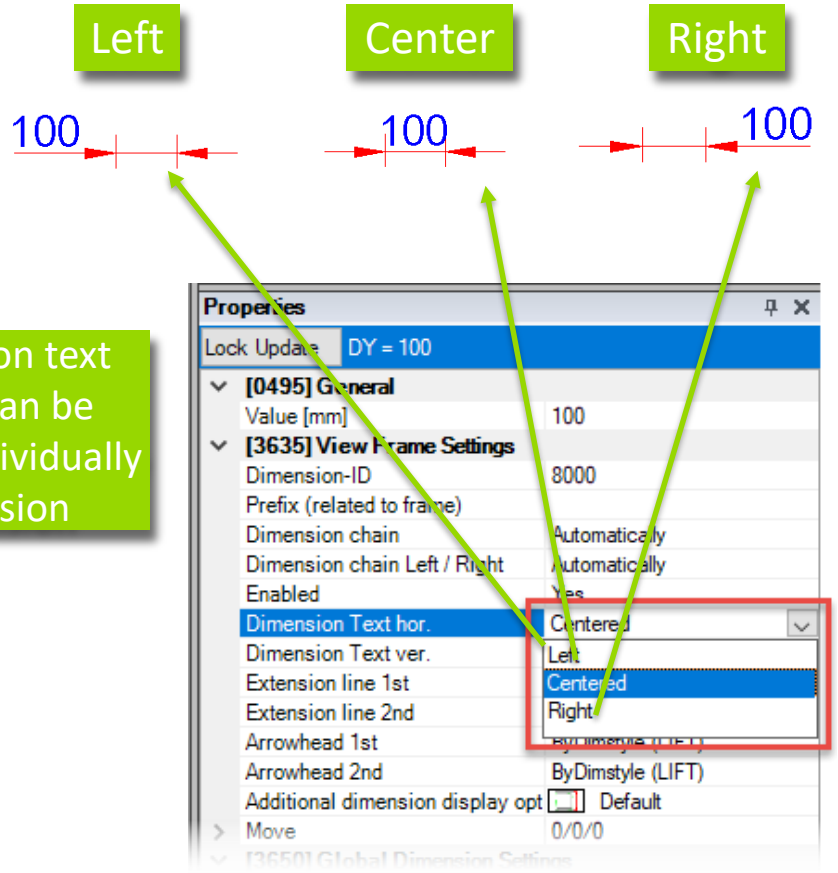
    Add the following sequence: **<!>** Any Expression

Dimension - Properties

- Aligning the dimension text vertically and horizontally

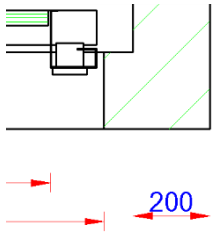


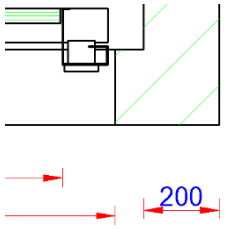
The dimension text alignment can be configured individually per dimension

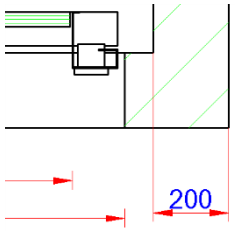


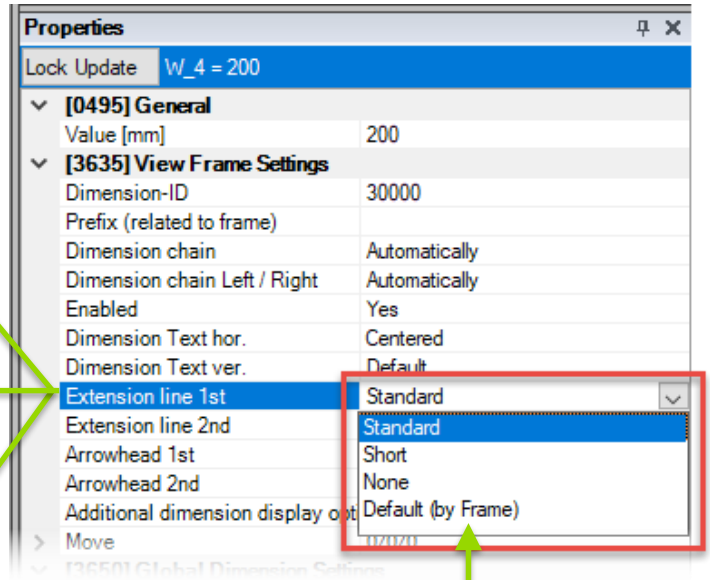
Dimension - Properties

- Dimension Extension Lines
  - None
  - Short
  - Standard





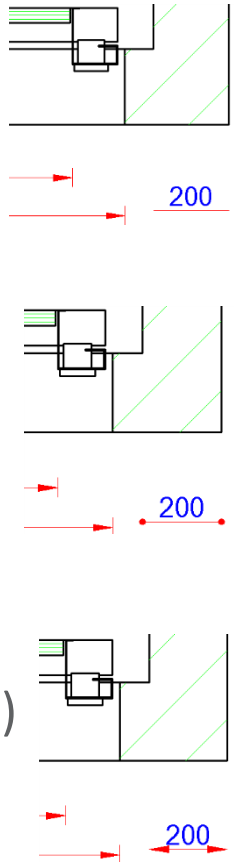


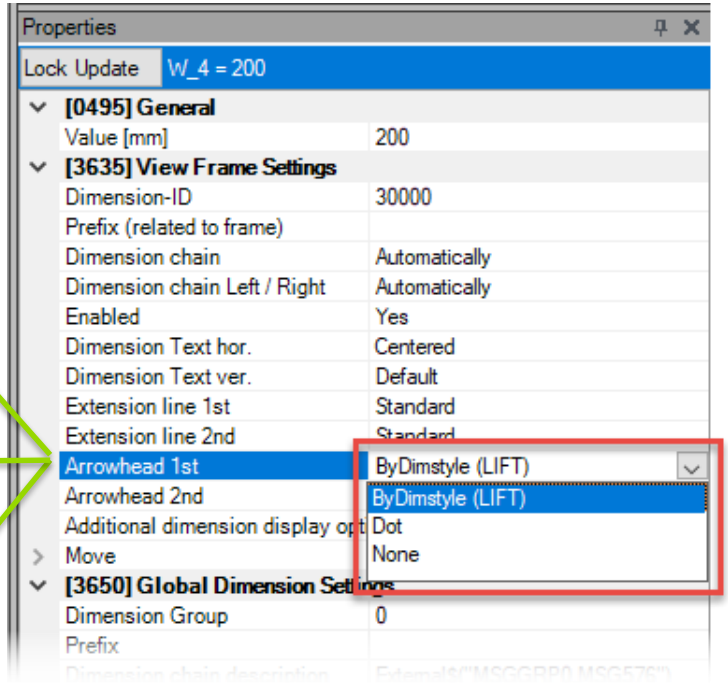


Extension lines can be set as whole via the properties of the view frame or the sheet. (Default)

Dimension - Properties

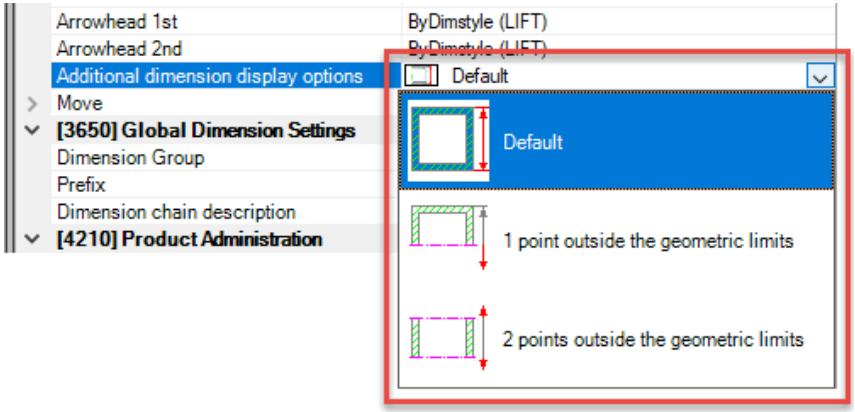
- Arrowheads
  - None
  - Dots
  - Standard (ByDimStyle)



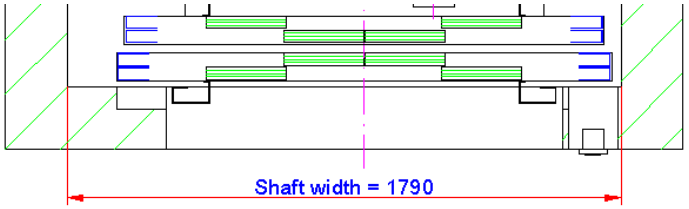


Dimension - Properties

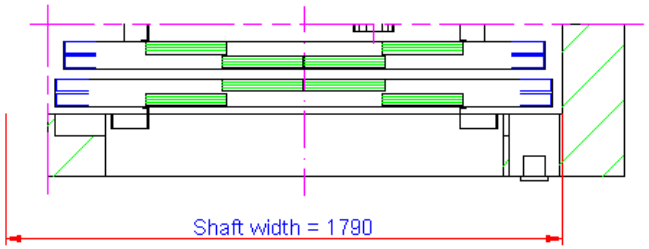
- Additional dimension display options (for detail sections)



- Default:
  - Both edges of the geometry, the dimension refers to, are visible



- 1 point out:
  - Only one edge of the geometry, the dimension refers to, is visible (detail section view)

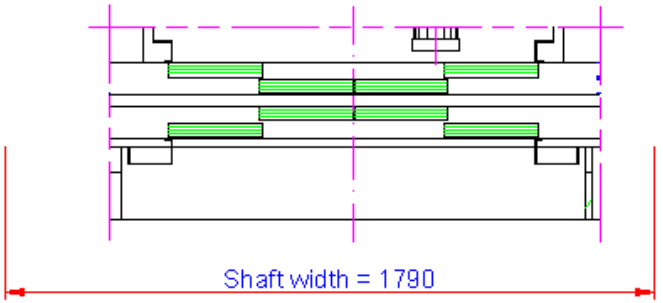


Dimension - Properties

- Additional dimension display options

  - 2 points out:
    - Non of the geometry edges, the dimension refers to, is visible (detail section view)

  - Hint:
    - The display option for the corresponding dimension must be selected, before the detail section gets created



Dimensions

Dynamic Dimensions

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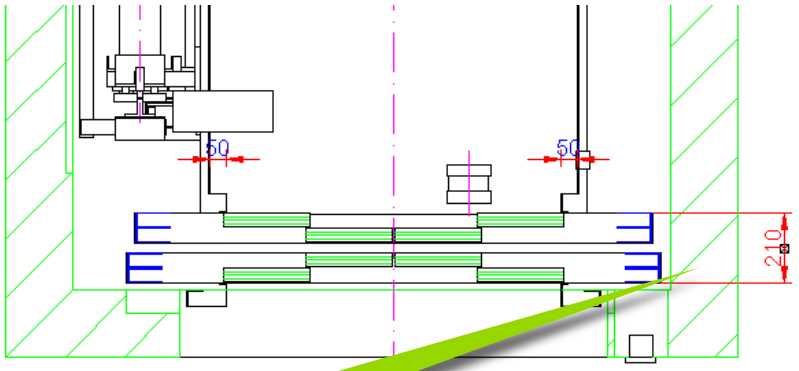
Dynamic Dimensions

- Can be customized individually
- Are DigiPara Liftdesigner non standard dimensions
- Do not influence the 3D data model

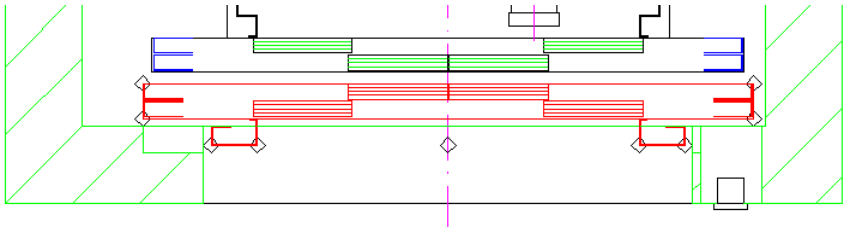


The width of the door package is not a default DigiPara Liftdesigner dimension

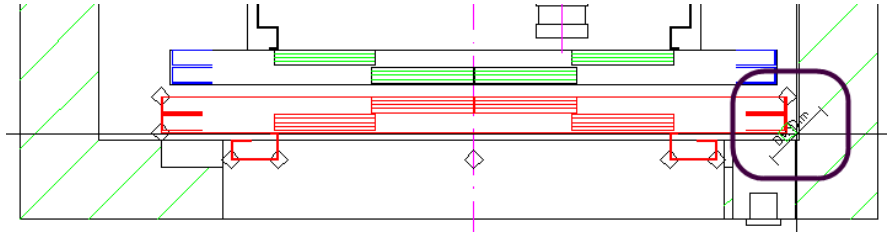
Dynamic Dimensions

- Creating a dynamic dimension

- Select a component to specify the first dimension point.

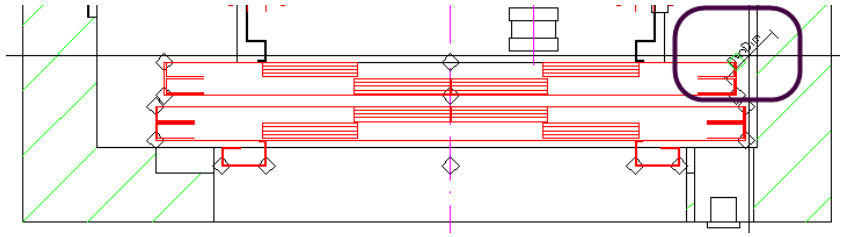


- Move the mouse cursor over one of the dimension points until the cursor text changes to **DynDim** and click on the left mouse button to select this point.

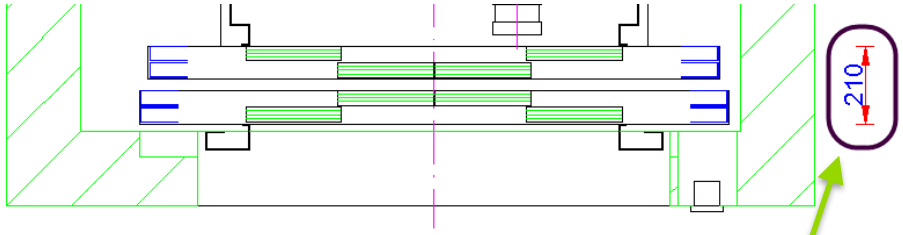


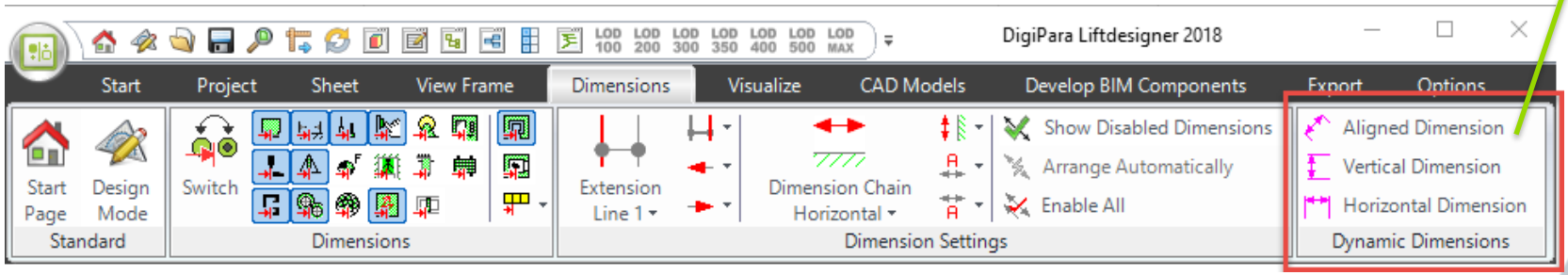
Dynamic Dimensions

- Click and hold the Ctrl key on the keyboard to select a second component. Afterwards release the Ctrl key. Next repeat the steps described under step 2 once again.



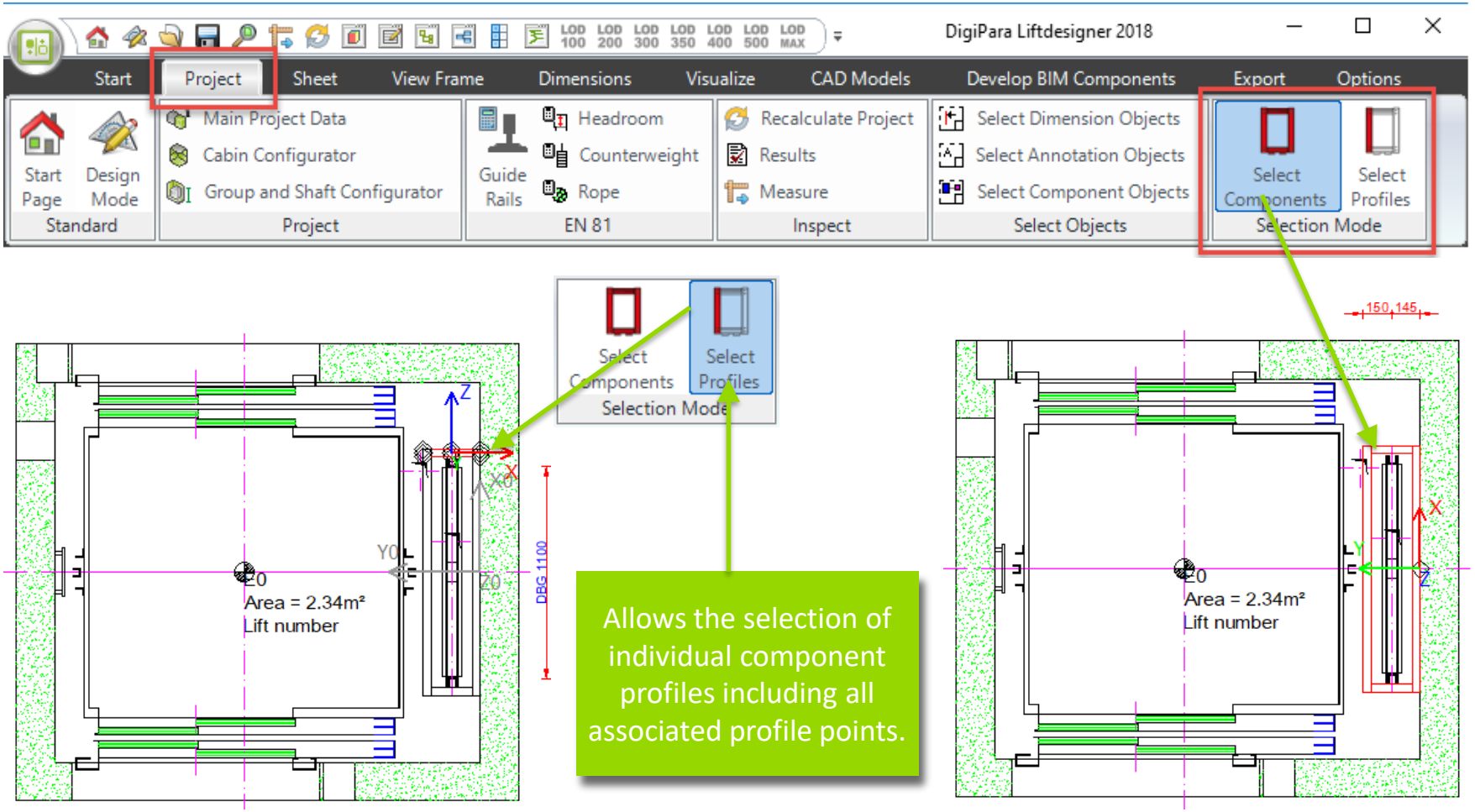
- The buttons in the Dynamic Dimensions group is now enabled. Click on one of the buttons to create either a horizontal, vertical or an aligned dimension.





Dynamic Dimensions

- Selection Mode



Practice - Dimension Properties

- Create a new sheet including a Plan View,
  2 Entrance Views (1 from the front,
  1 from the side) and a Machine Room View:
- Views:
  - Reorganize the dimension chains by using
    the dimension ID’s
  - Remove unnecessary dimensions
  - Adapt dimension extension lines and dimension arrows
  - Align dimension chains horizontally and vertically
  - Change local dimension prefixes if necessary
  - Create your own dynamic dimensions

Practical Examples

General

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The next slides provide some typical, non specific examples

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General

- Rail Bracket Fixing Options
- Entrance Pocket
- Additional Sill Options
- Car Balustrade
- Assembly Platforms

Practical Examples

General – Rail Bracket Fixing Options

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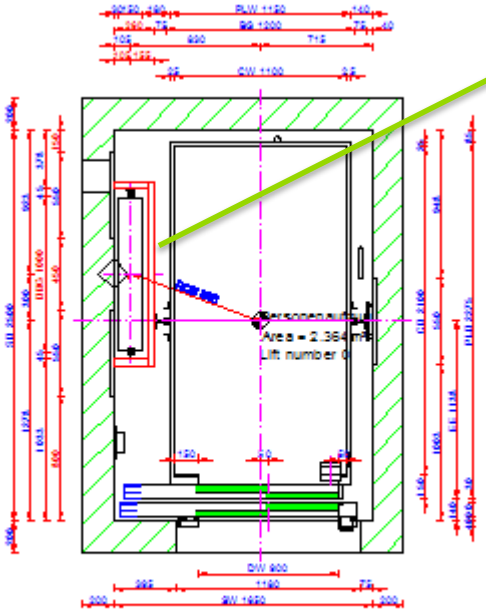
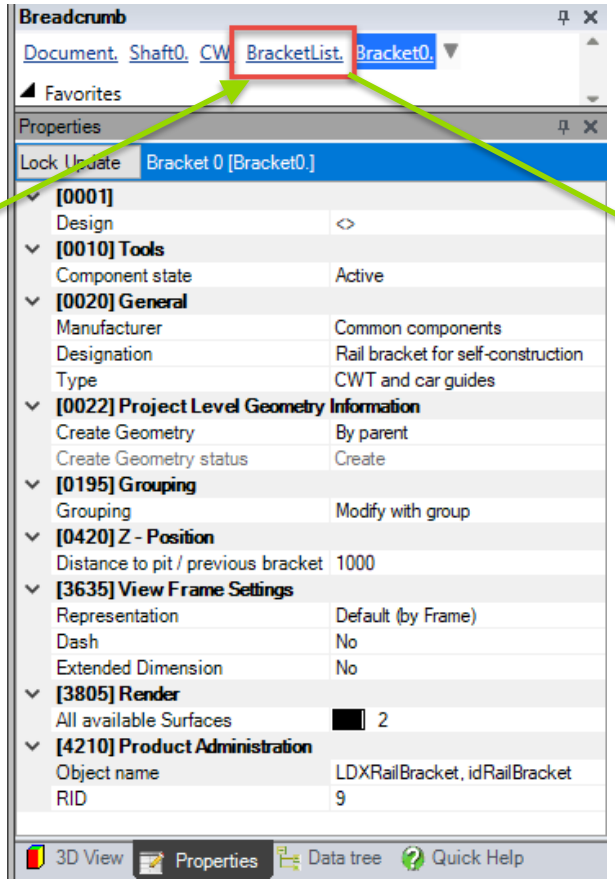
Rail Bracket Fixing Options

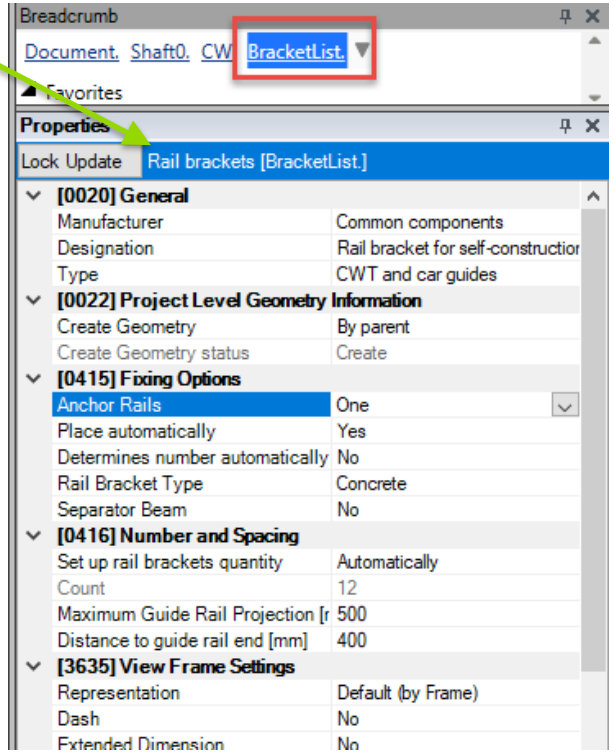
- Can be changed via the **Rail brackets list**

The **Rail brackets** properties can be displayed by selecting a single bracket in the drawing and selecting the **Rail brackets** object via the **Breadcrumb** window afterwards.



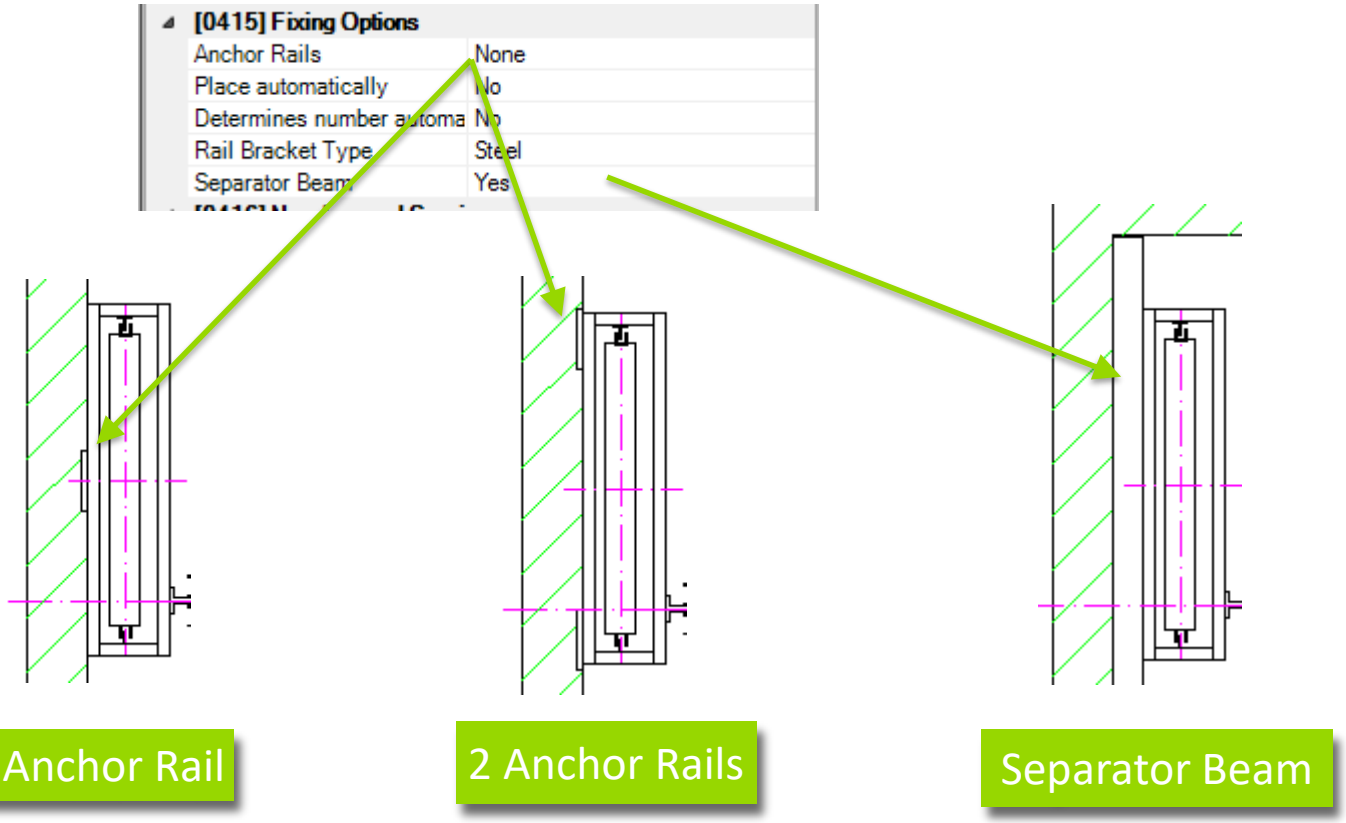
Plan
Scale: 1:20





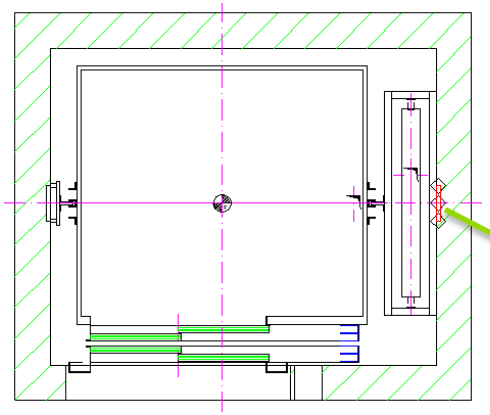
Rail Bracket Fixing Options

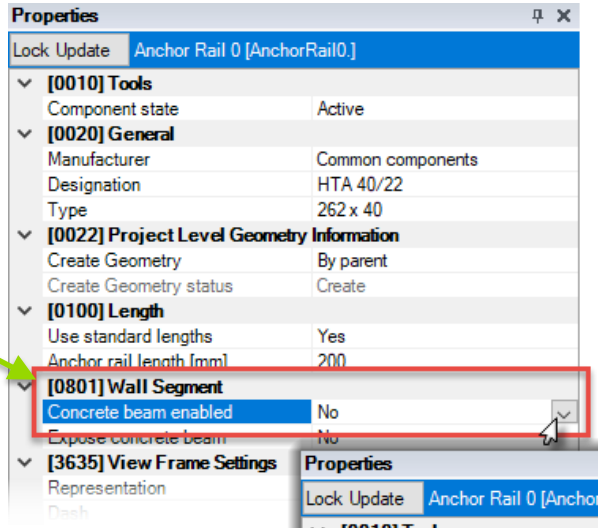
- Different Fixing Options

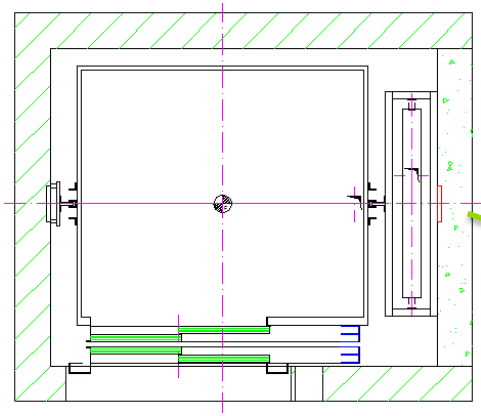


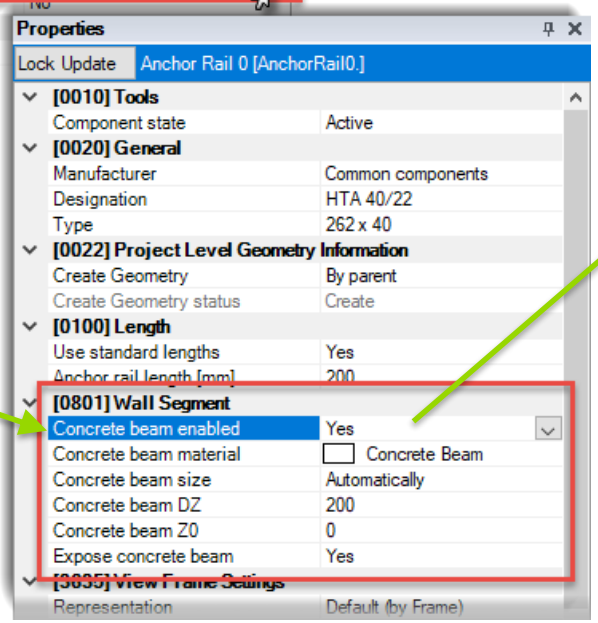
Rail Bracket Fixing Options

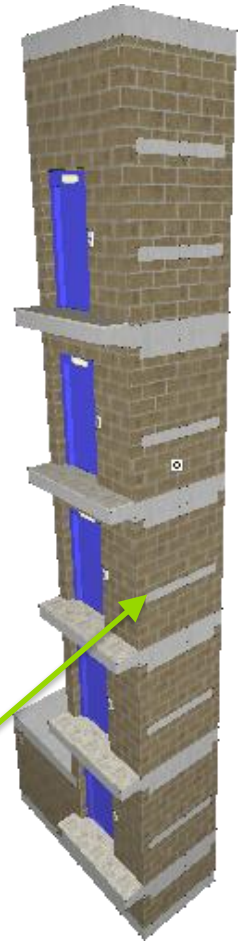
- Concrete Beam for Anchor Rails











Practical Examples

General – Entry Pocket

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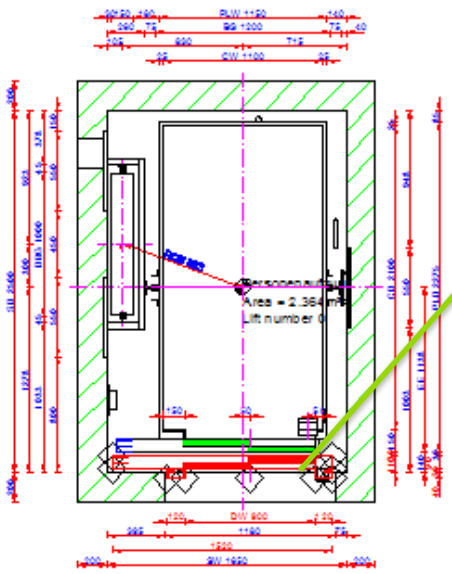
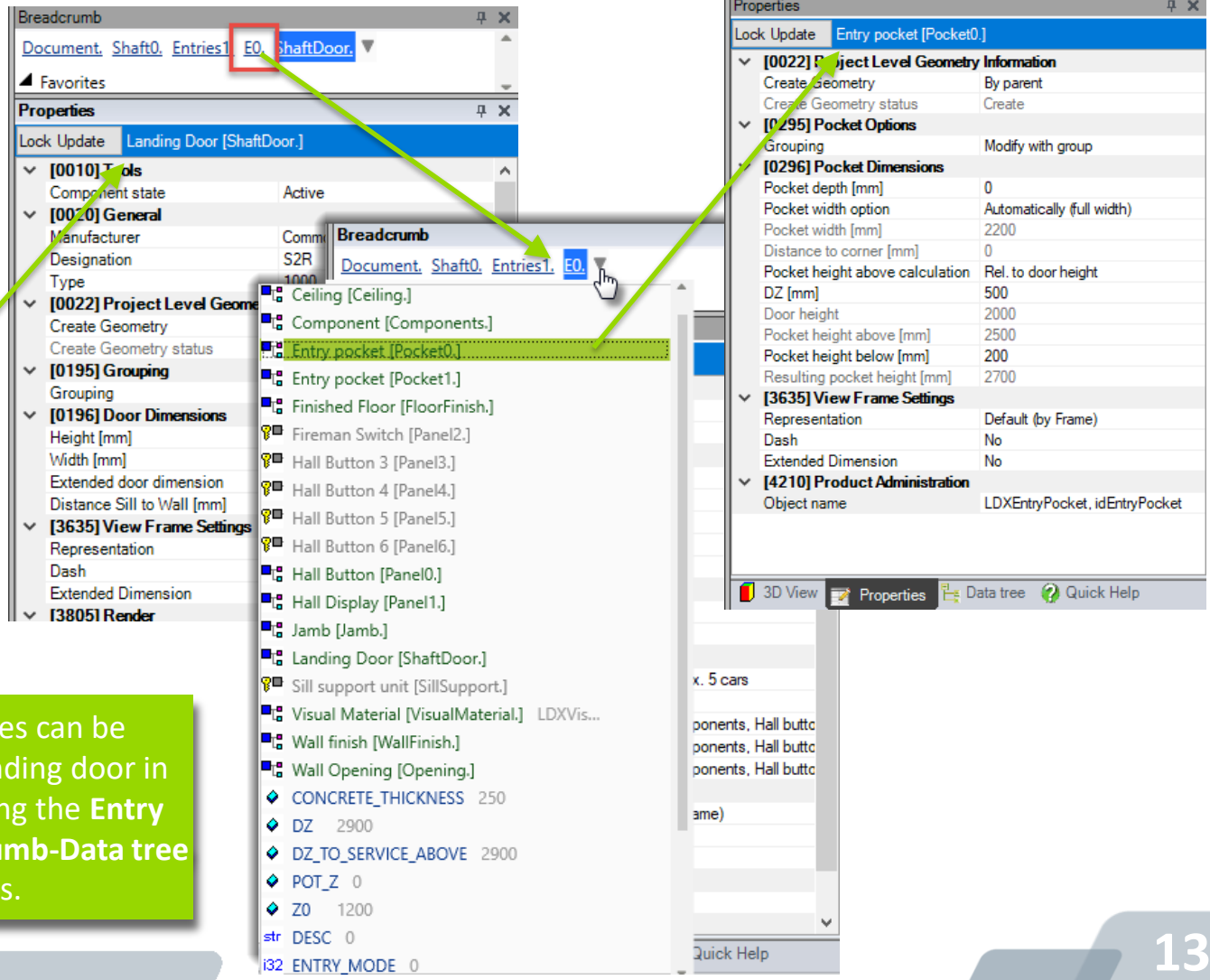
Entry Pocket

- Display the **Pocket** properties





The **Entry Pocket** properties can be displayed by selecting the landing door in the drawing first and selecting the **Entry Pocket** object via the **Breadcrumb-Data tree** window afterwards.

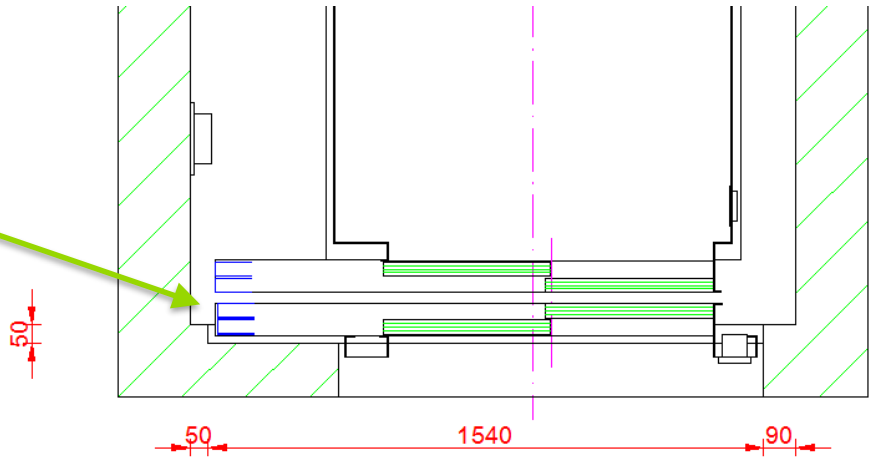
Entry Pocket

- Editing the entry pocket

The Entry Pocket automatically gets created for all entries on the corresponding shaft wall. It can be added to an individual entry only by changing the **Grouping** property to **This pocket is different**.

Properties

Lock Update	Entry pocket [Pocket0.]
[0022] Project Level Geometry Information	
Create Geometry	By parent
Create Geometry status	Create
[0295] Pocket Options	
Grouping	This pocket is different
[0296] Pocket Dimensions	
Pocket depth [mm]	50
Pocket width option	Manually
Pocket width [mm]	1540
Distance to corner [mm]	50
Pocket height above calculation	Rel. to door height
DZ [mm]	500
Door height	2000
Pocket height above [mm]	2500
Pocket height below [mm]	200
Resulting pocket height [mm]	2700
[3635] View Frame Settings	
Representation	Default (by Frame)
Dash	No
Extended Dimension	No
[4210] Product Administration	
Object name	LDXEntryPocket, idEntryPocket



Practical Examples

General – Additional Sill Option

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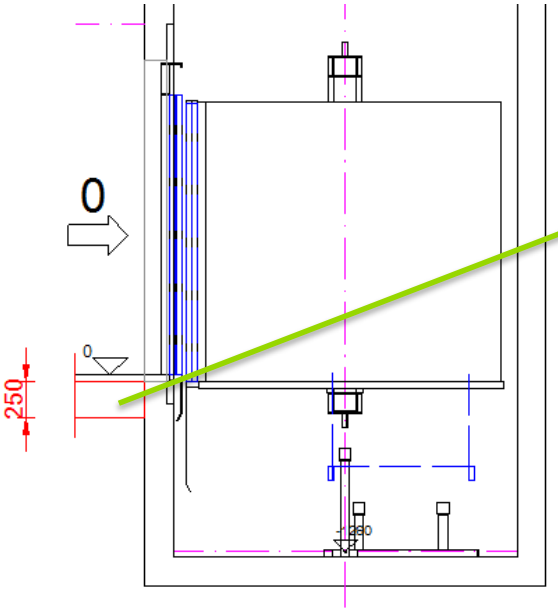
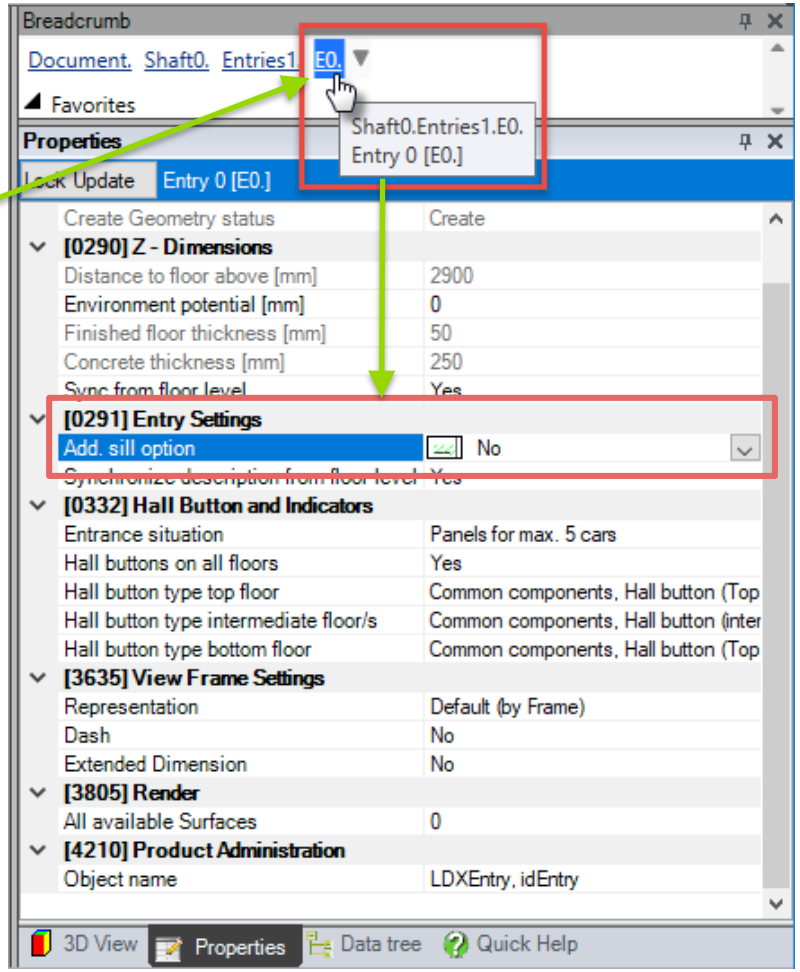
Additional Sill Option

- Display the **Entry** properties

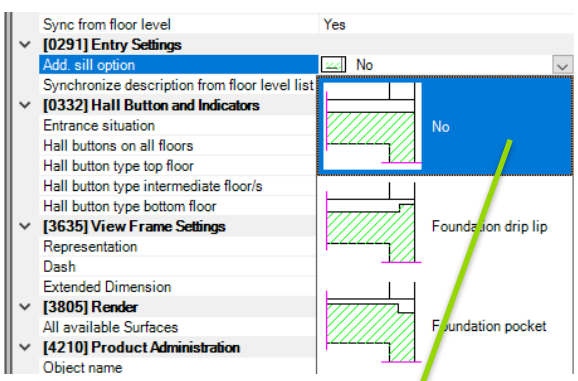


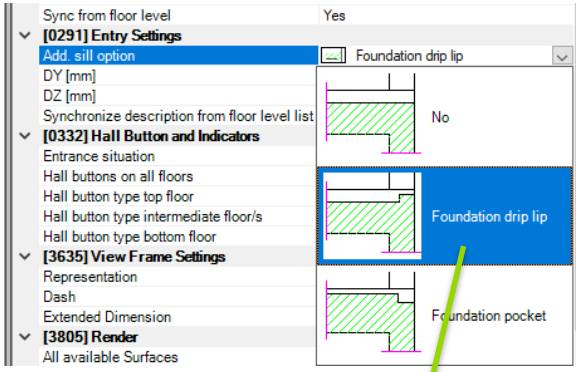
The **Entry** properties can be displayed by selecting the entry concrete in a vertical view (in **Edit mode** -> hatches turned off)

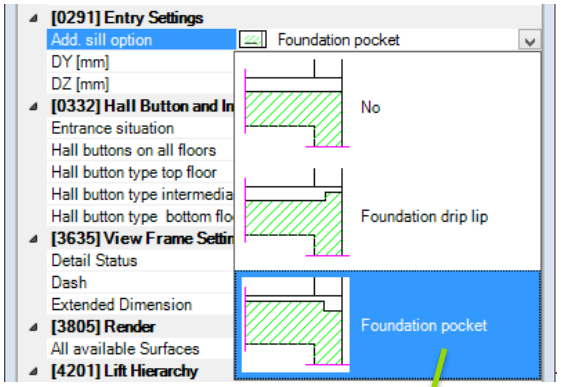


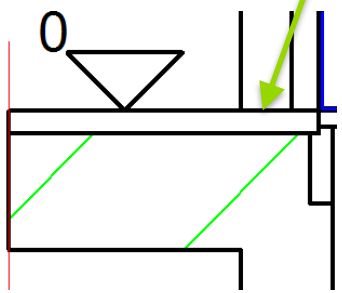
Additional Sill Option

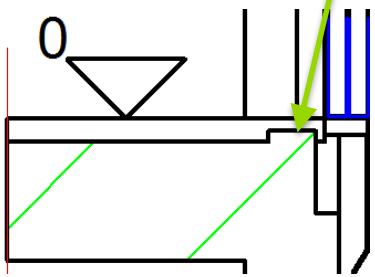
- Select from 3 different sill options
  - The **Add. sill option** will be applied to all entries on the corresponding shaft wall

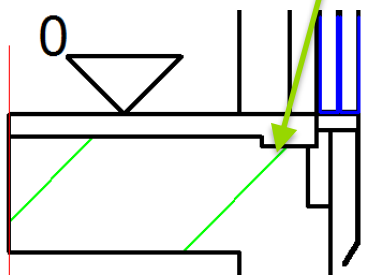












No

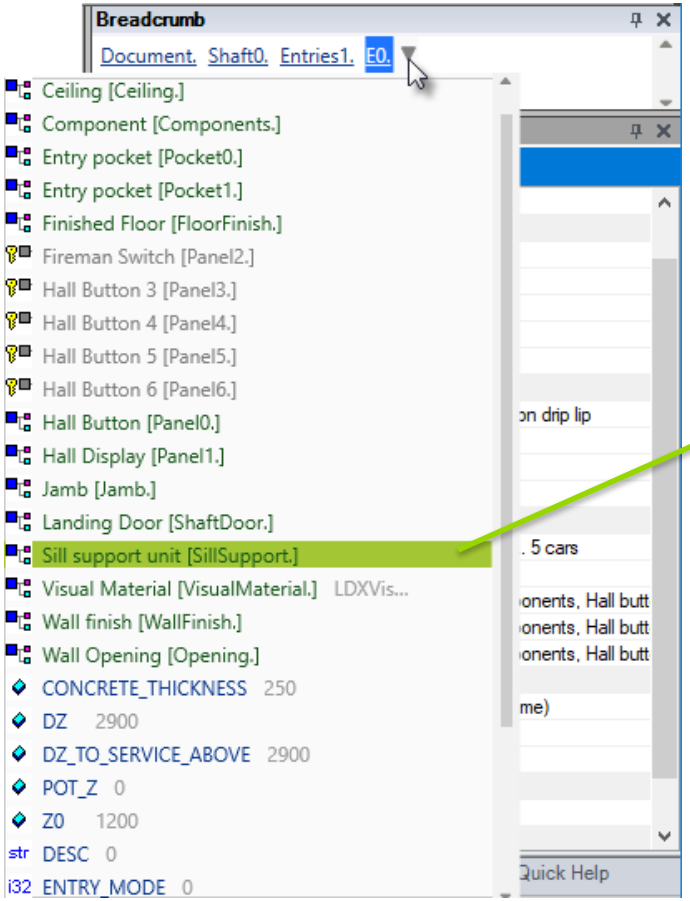
Foundation drip lip

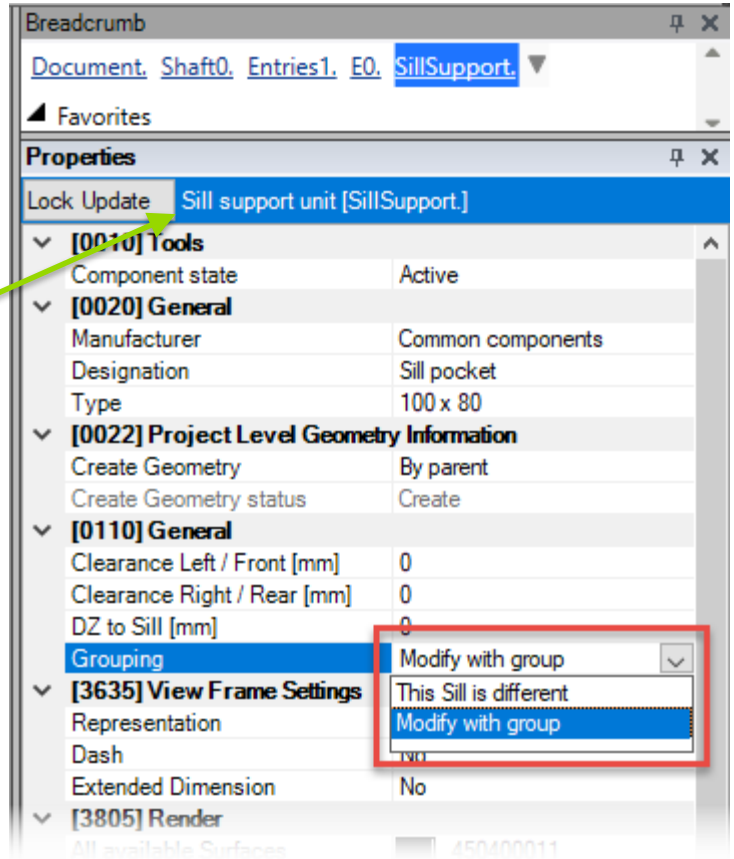
Foundation pocket

Additional Sill Option

- Set the **Add. Sill option** individually for just 1 entrance

The **Grouping** property of the **Sill support unit** is used to apply the **Add. Sill option** to a single entrance only. The property must be set before applying the **Add. Sill option**.





Practical Examples

General – Car Balustrade

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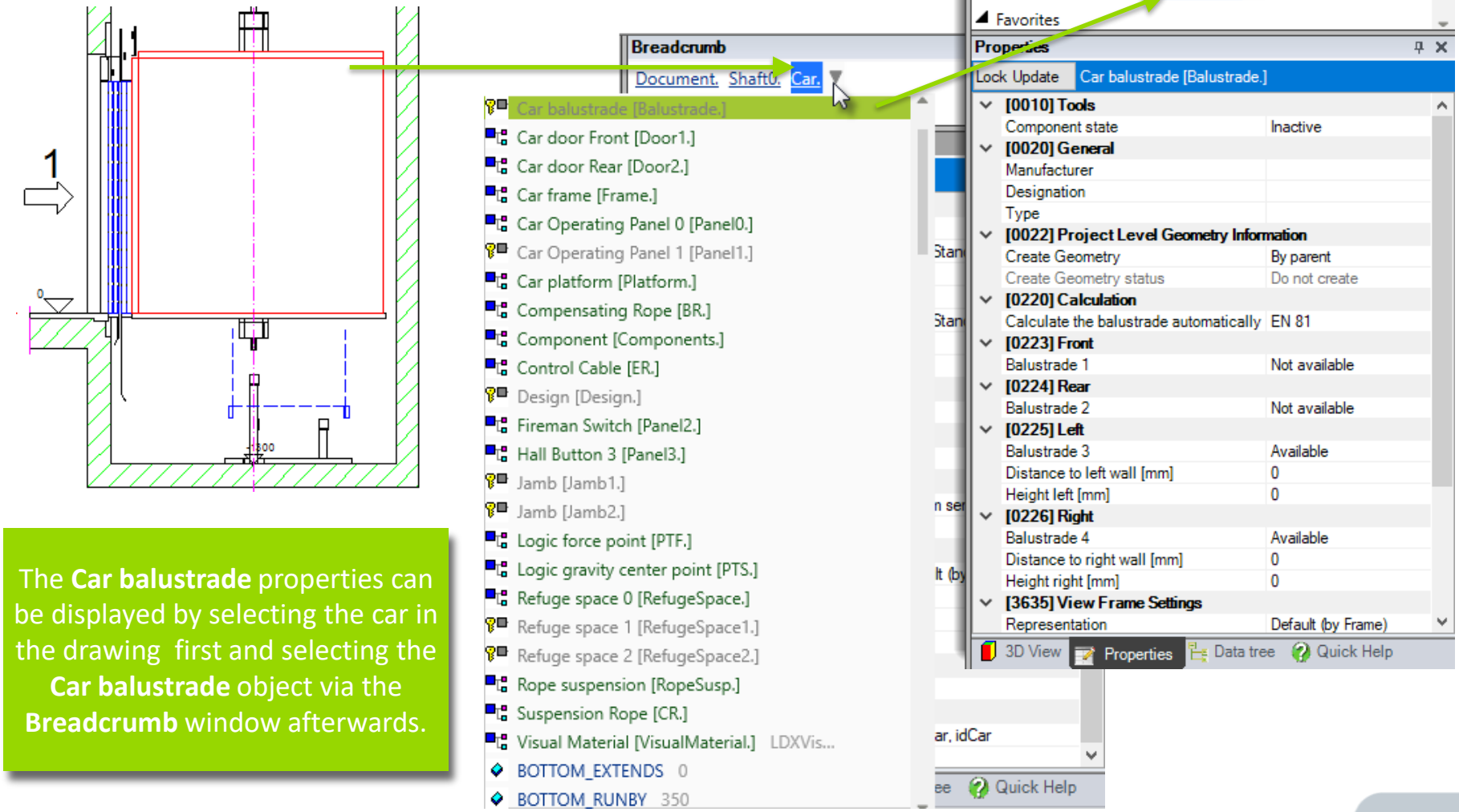
Car Balustrade

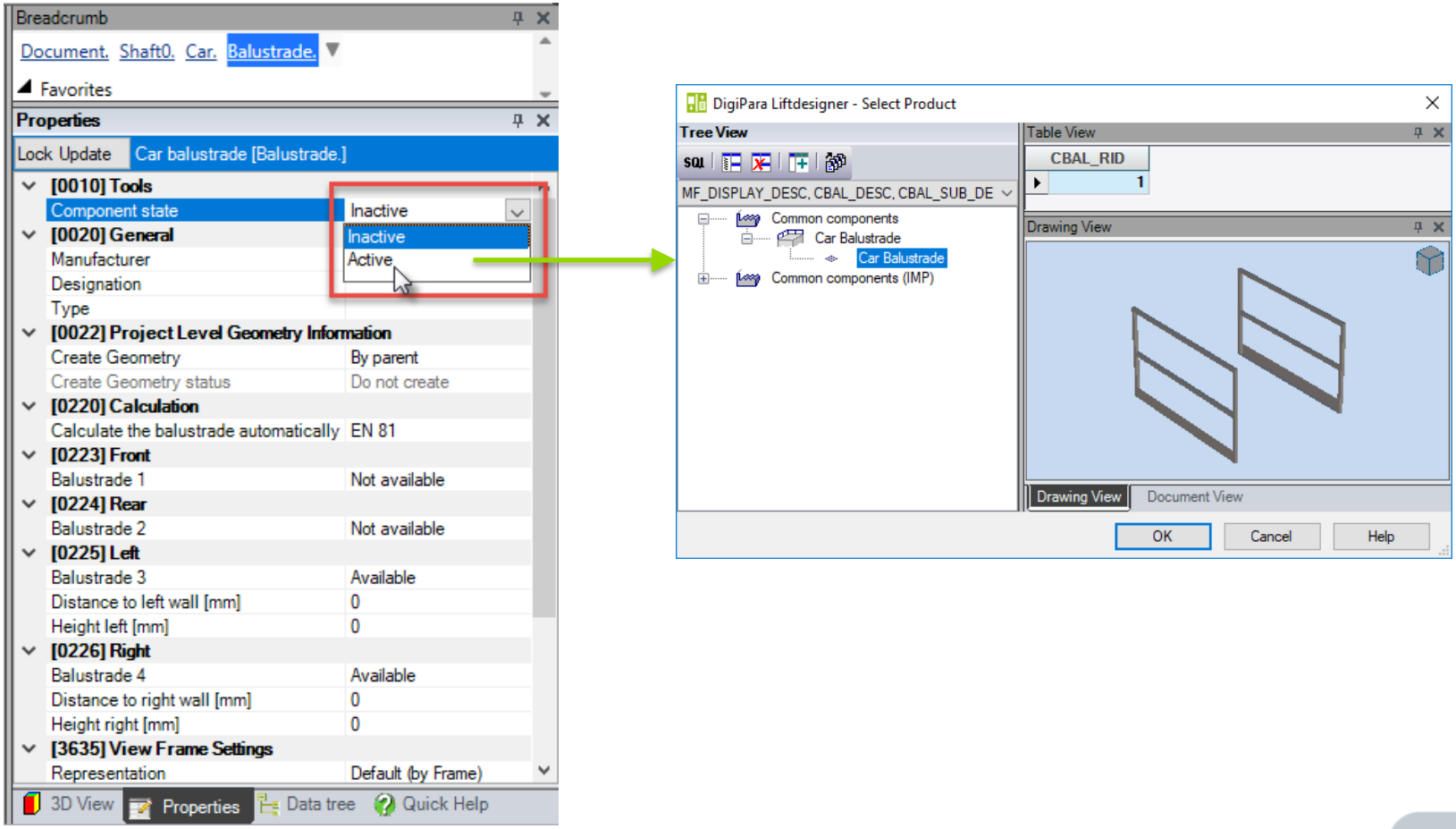
- Display the **Car Balustrade** properties



The **Car balustrade** properties can be displayed by selecting the car in the drawing first and selecting the **Car balustrade** object via the **Breadcrumb** window afterwards.

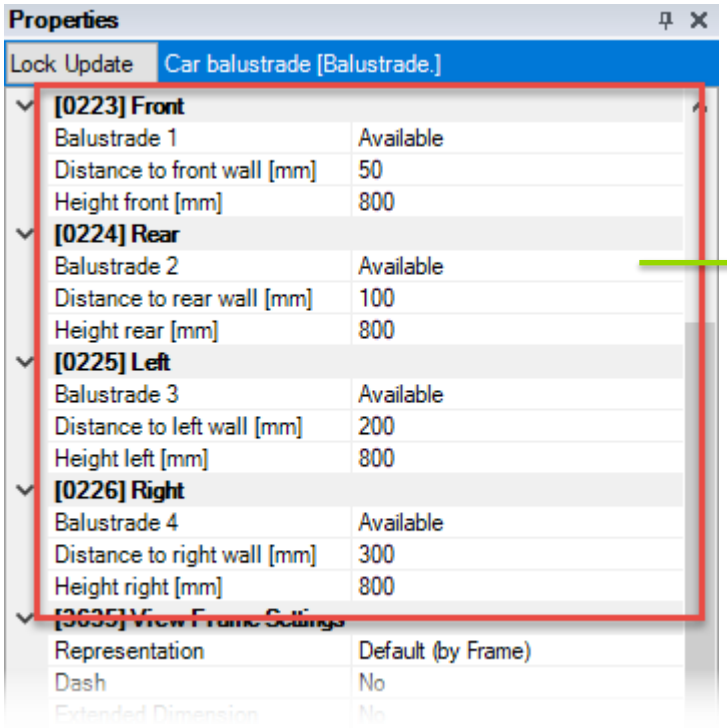
Car Balustrade

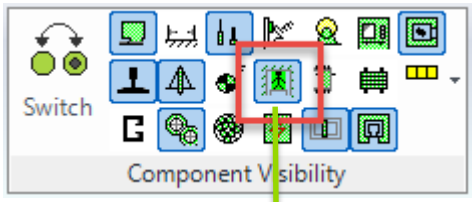
- Activating and selecting the car balustrade

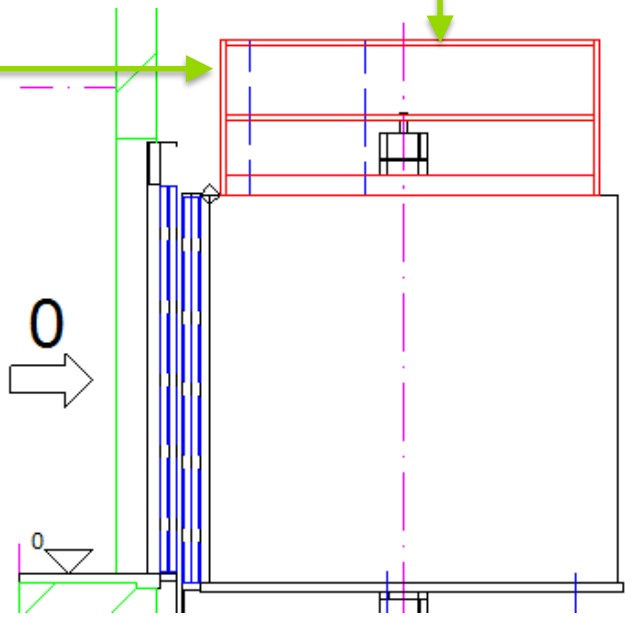


Car Balustrade

- Configuring the balustrade







Practical Examples

General – Assembly Platforms

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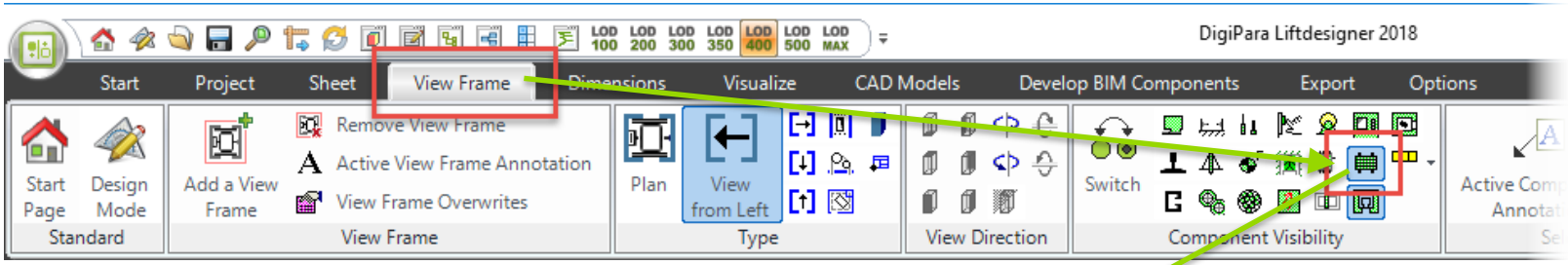
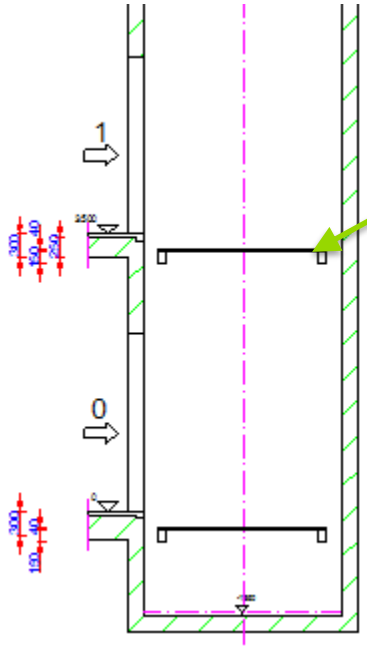
Assembly Platforms

- Display the Assembly platforms



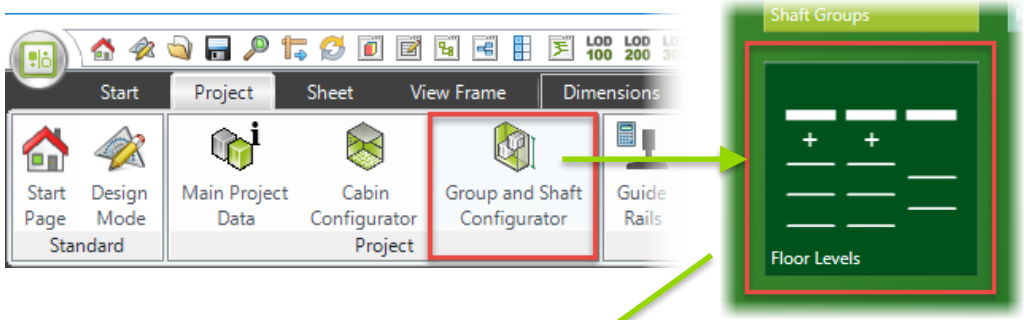


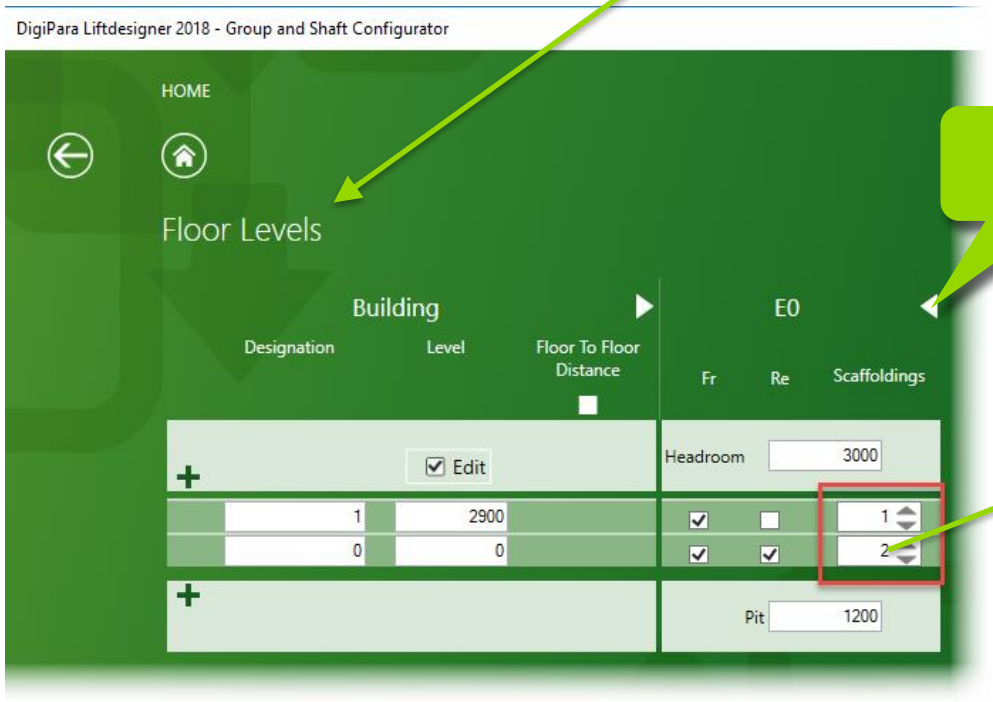
The **Assembly platforms** can be activated via the corresponding button in the **Component Visibility** ribbon group

Assembly Platforms

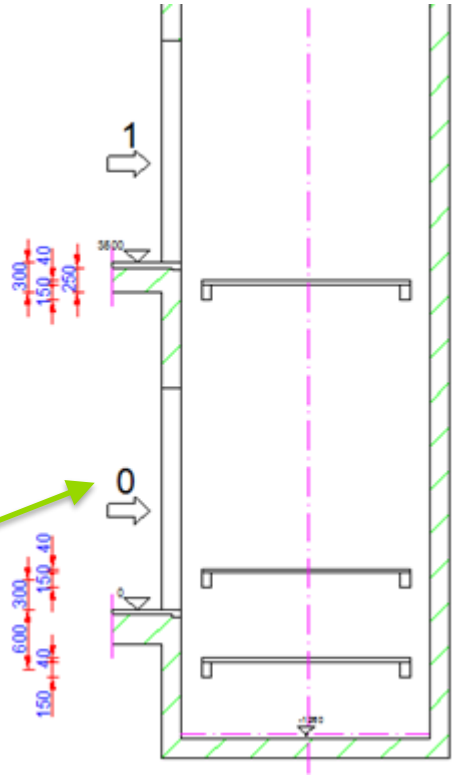
- Amount and position

The number of **Assembly platforms** per floor can be adapted by the **Floor Level List**. The position can be changed via the corresponding dimensions in the drawing





Extended Settings



Practical Examples

Traction Elevators

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The next slides provide some typical, traction elevator specific examples

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Practical Examples - Traction Elevator

- Changing the counterweight location
- Changing the pulley beam settings
- MRL Gear Base Construction Unit
- L_Type Car Frame

Practical Examples

Traction Elevators – CWT Location

YouTube: Changing the counterweight location

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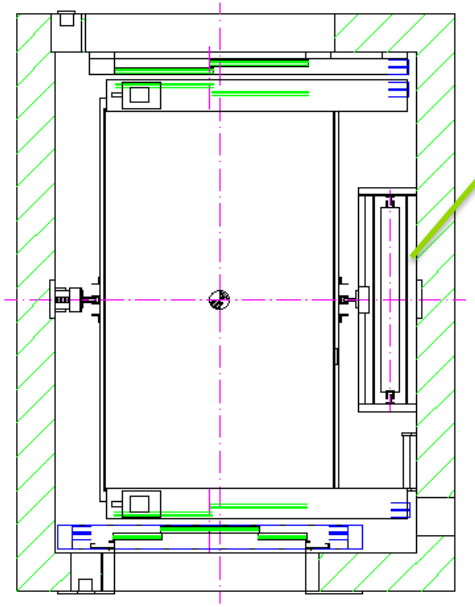
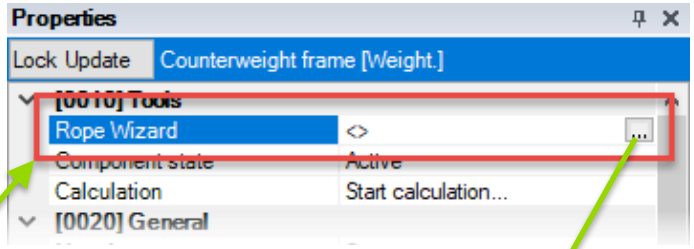
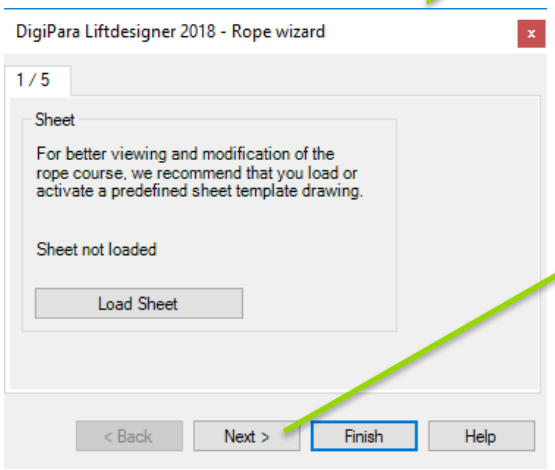
Changing the counterweight location

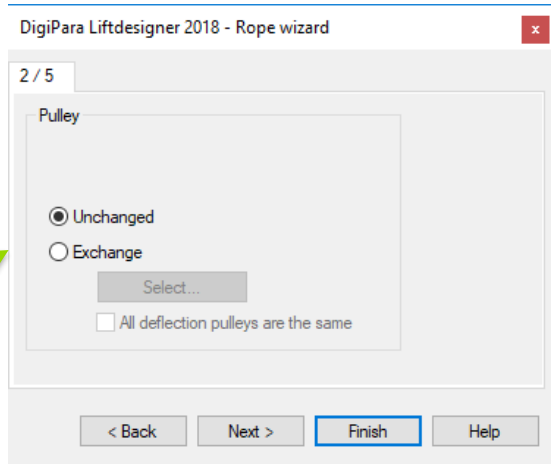
- Via the Rope Wizard
  - For existing projects



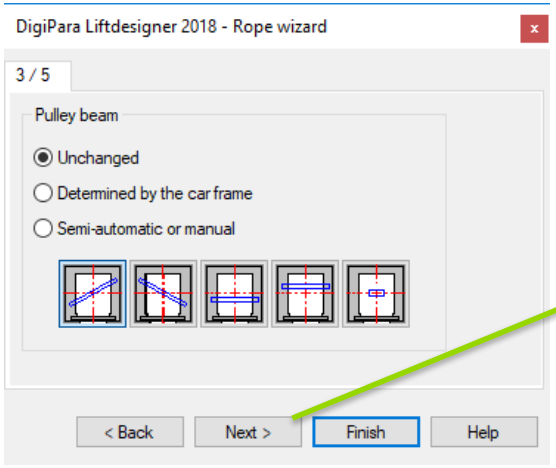


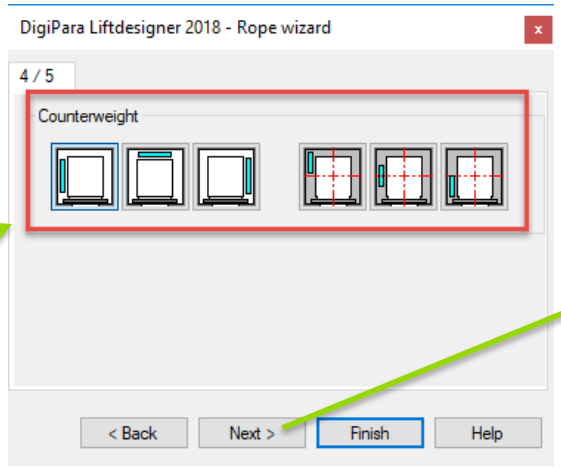
The Rope Wizard can be activated via the traction machine, the counterweight, the pulley or the pulley beam properties.

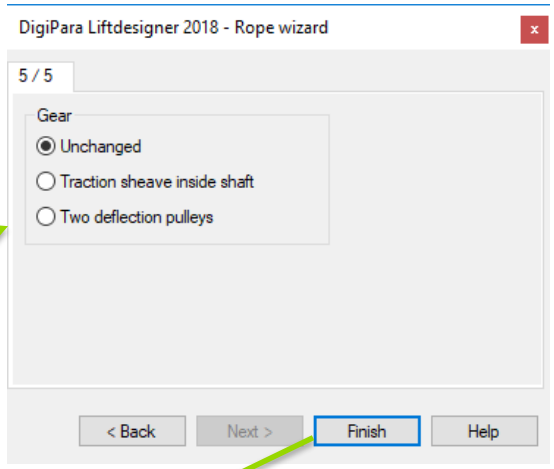




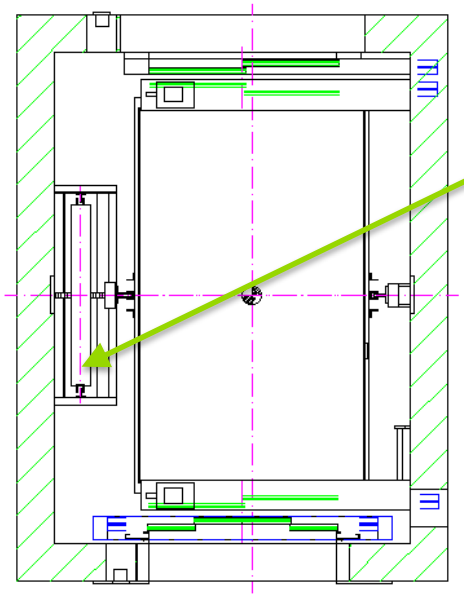
Changing the counterweight location







Change the counterweight location via the Rope Wizard dialog 4/5



Practical Examples

Traction Elevators – Pulley beam settings

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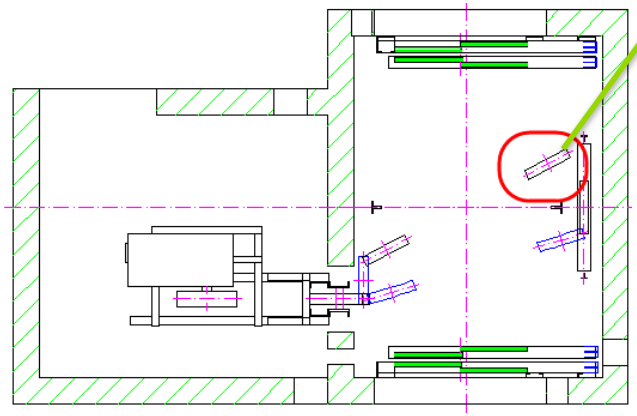
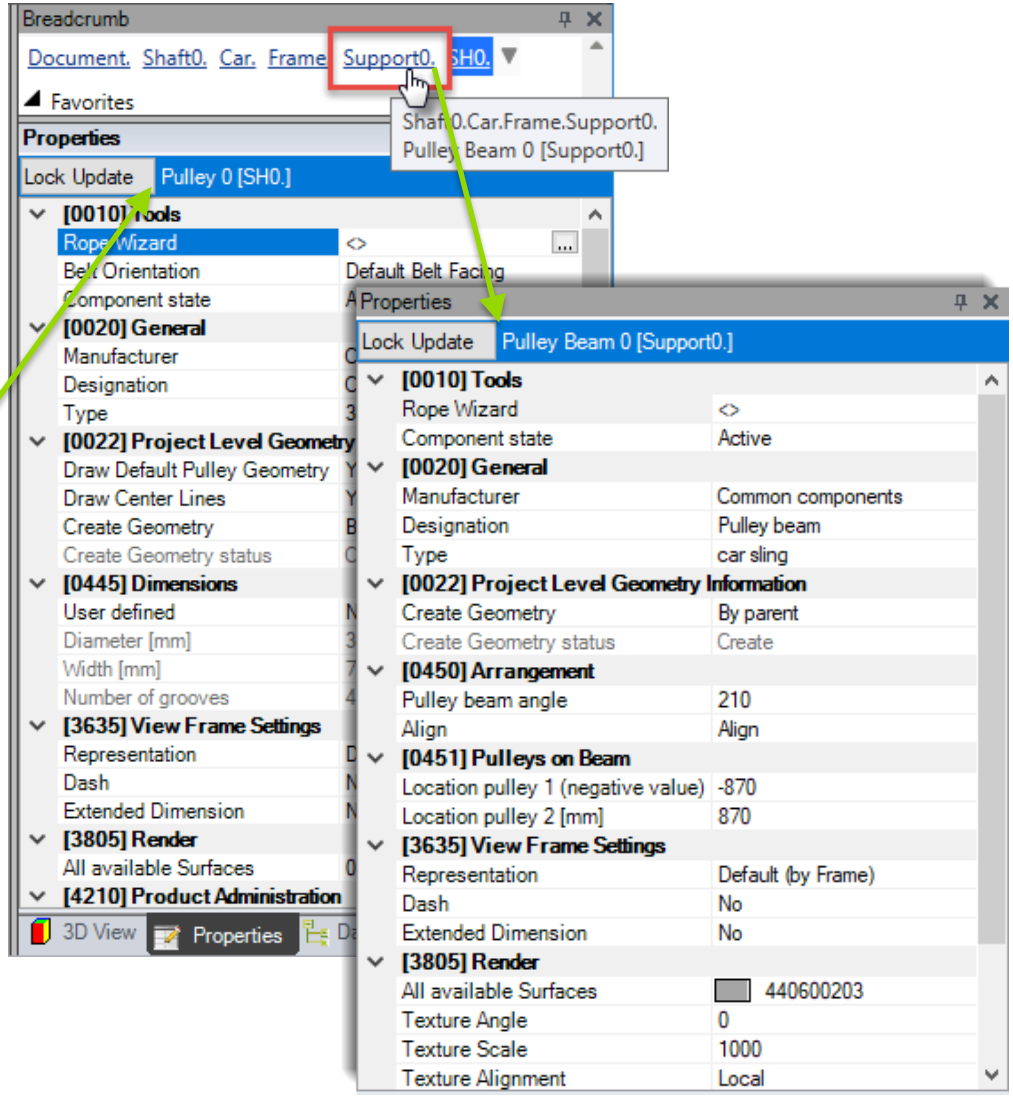
Changing the pulley beam settings

- Of the Car-/ CW frame
  - Via the pulley beam properties



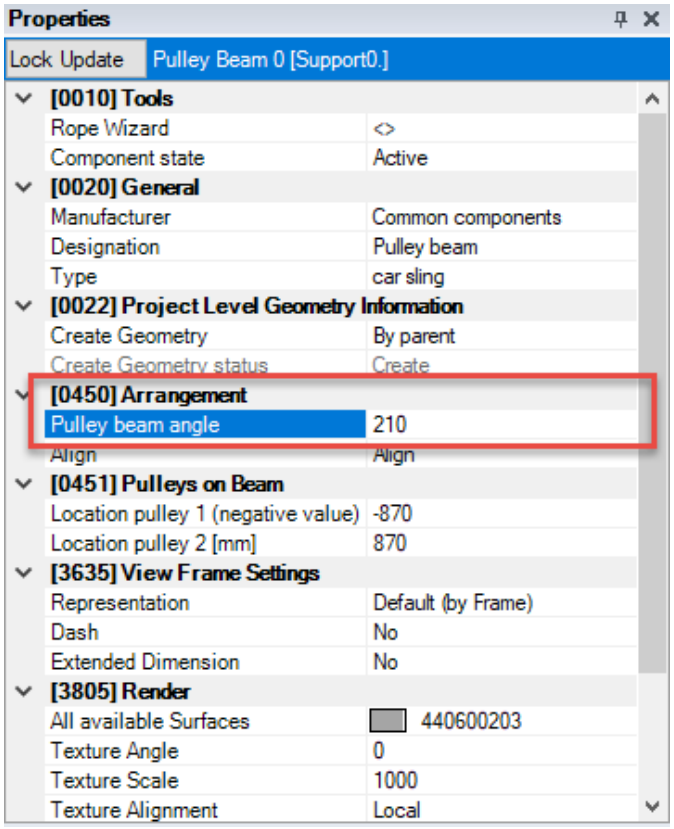


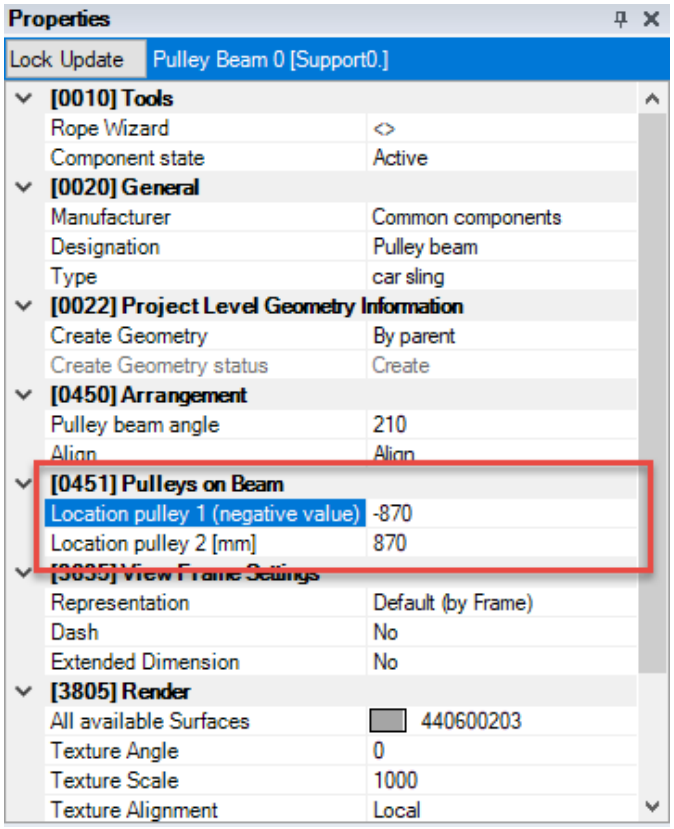
The **Pulley Beam** properties can be activated via the **Pulley Beam** link in the **Breadcrumb**

Changing the pulley beam settings

- Angle and location

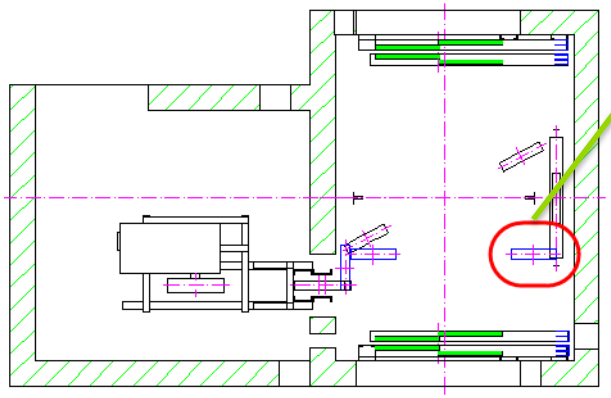
The angle and location of the car and CW pulley beams gets set via the **Angle** and **Pulley Location** properties

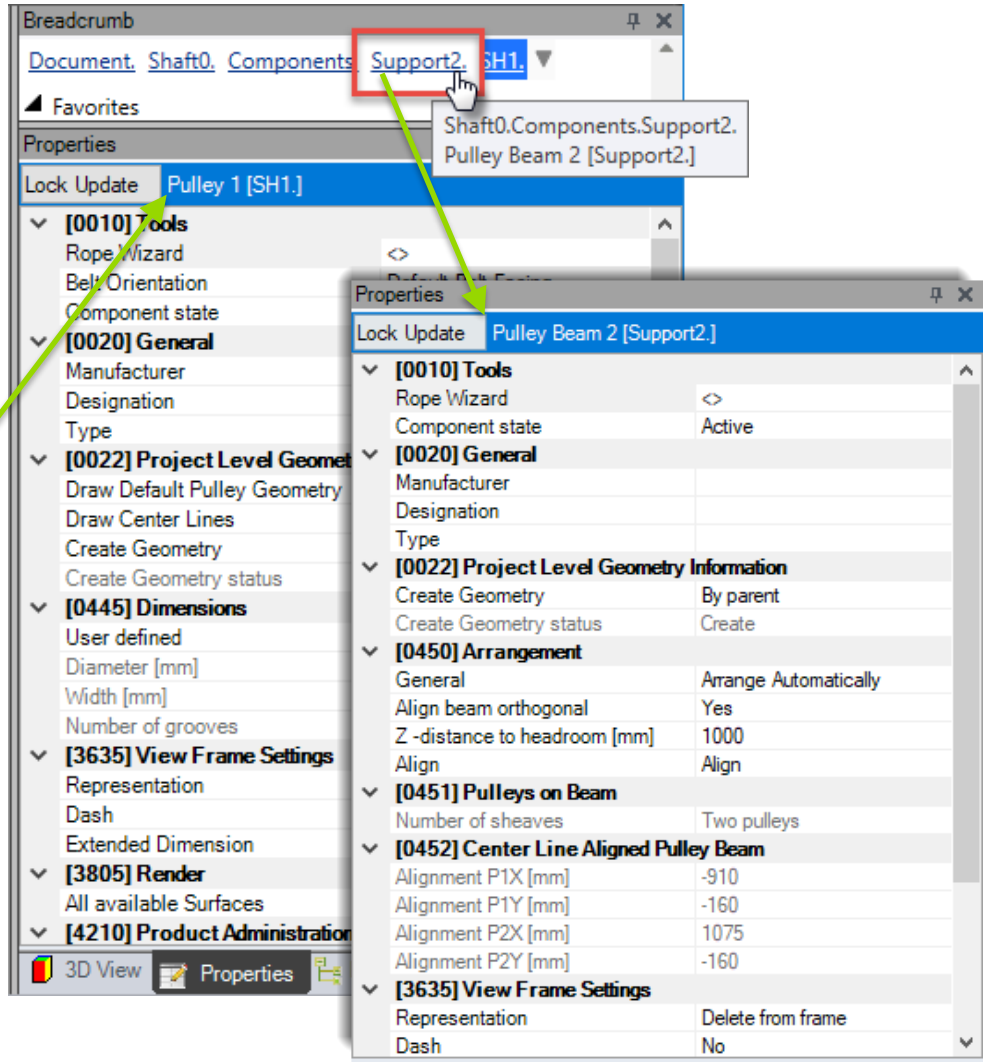




Changing the pulley beam settings

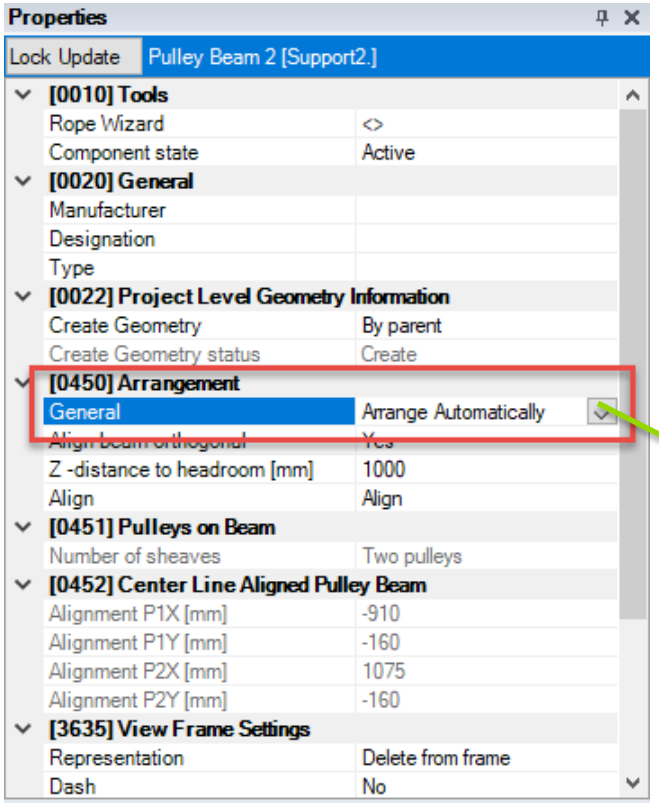
- Additional pulley beams
  - Via the pulley beam properties



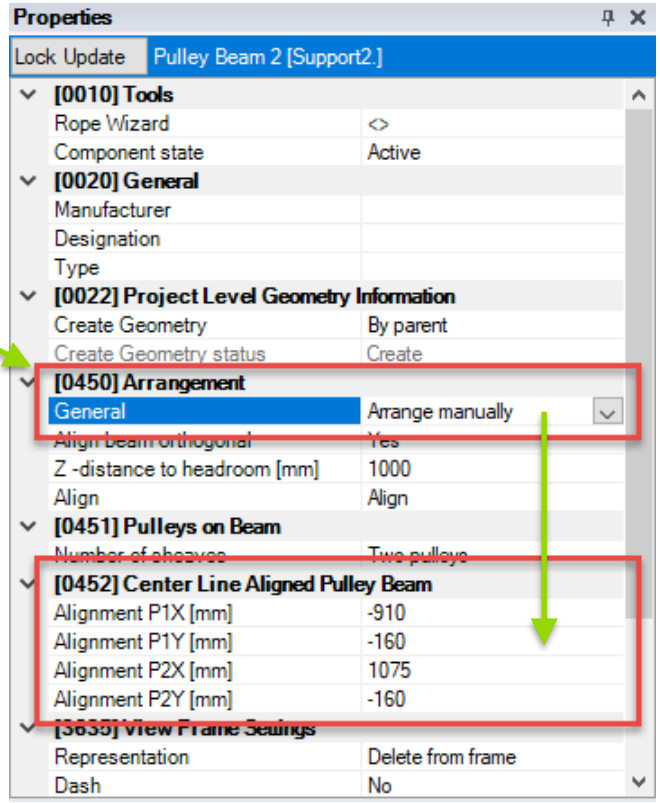


Changing the pulley beam settings

- Angle and location



The angle and location of the add. pulley beams can be set via the **P*X- / P*Y-** and the **Orthogonal** properties



Practical Examples

Traction Elevators – MRL Gear Base Construction Unit

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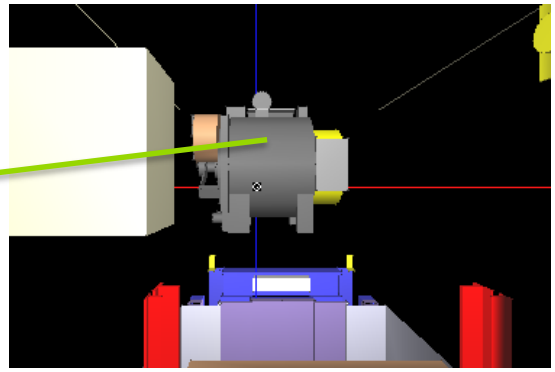
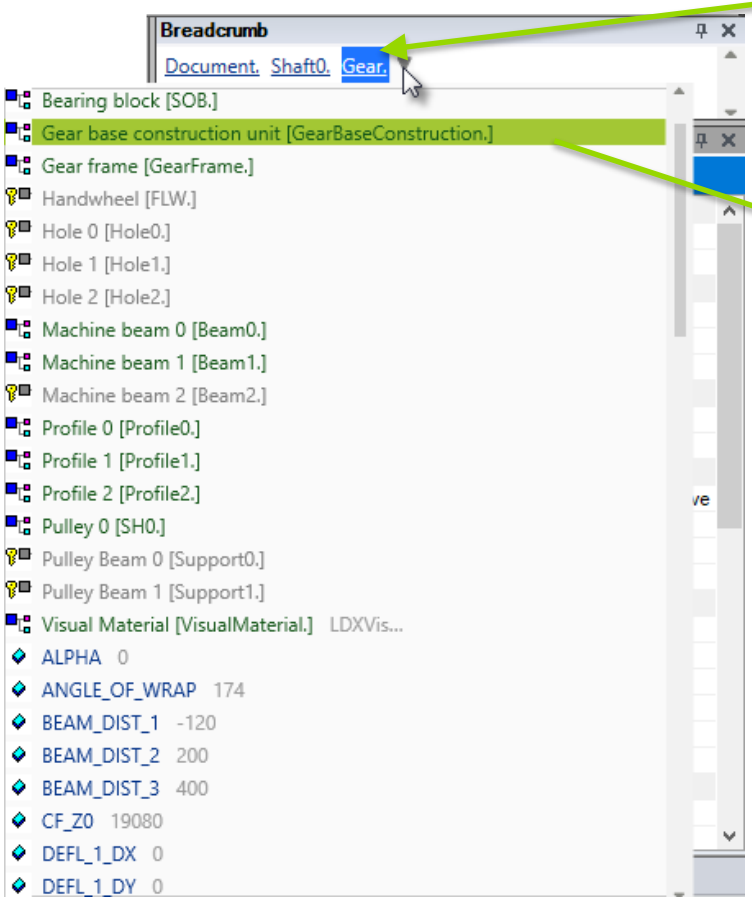
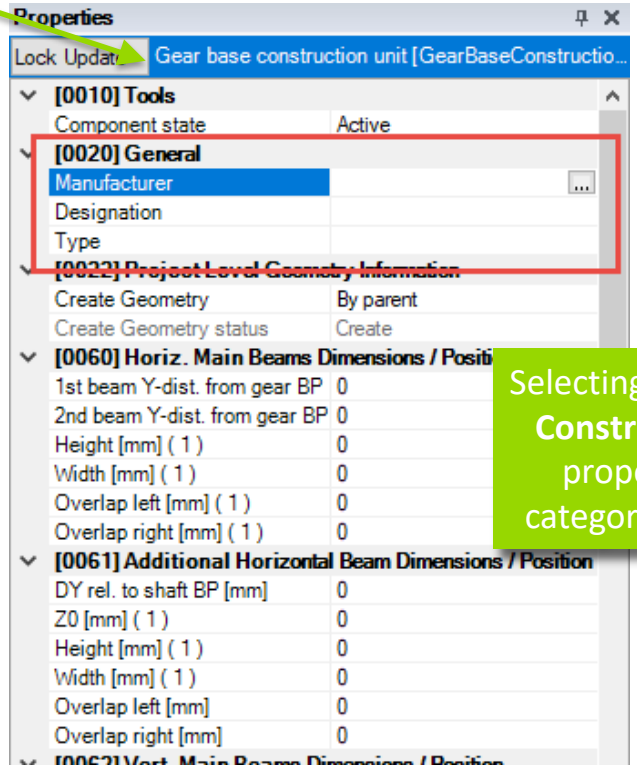
MRL Gear Base Construction Unit

- Can be activated via the Properties docking window



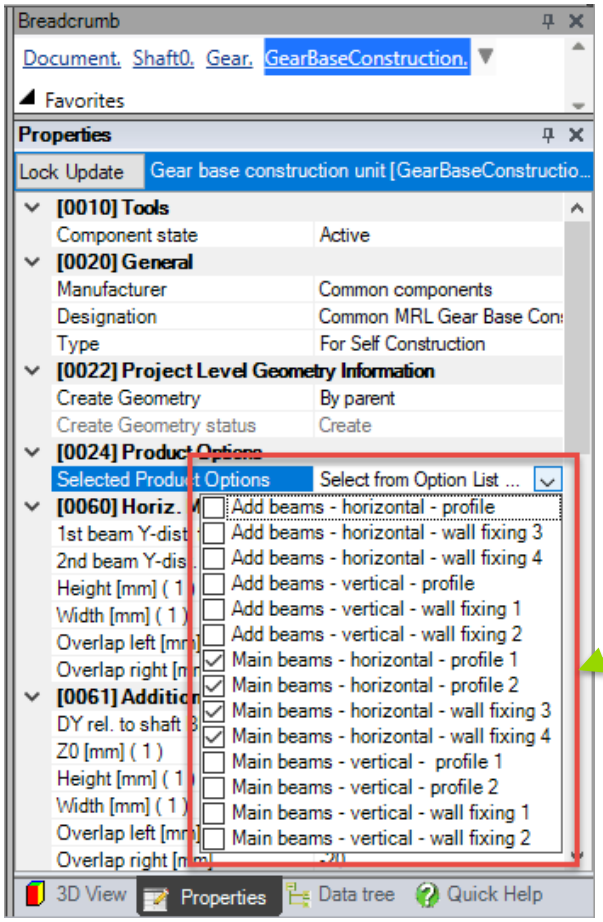


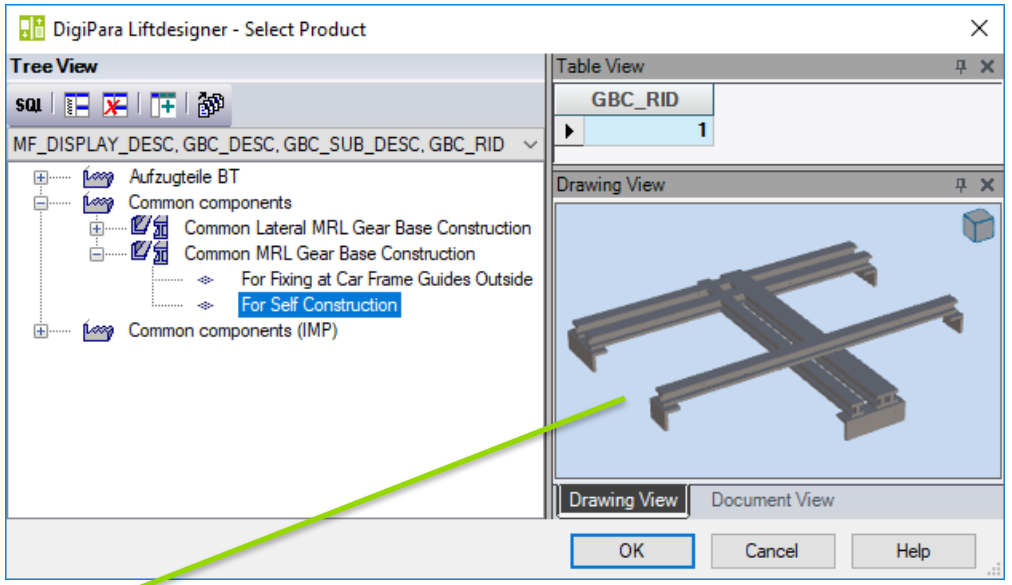


Selecting the **Gear Base Construction** via the properties of the category [0020] items

MRL Gear Base Construction Unit

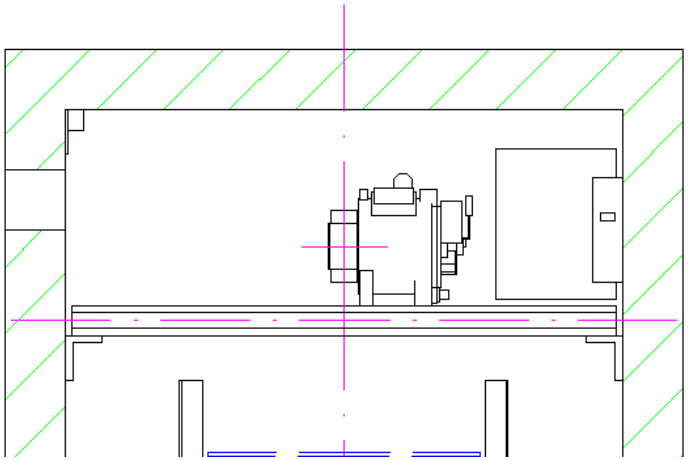
- Selecting the common gear base construction
  - And enabling / disabling component profiles via the **Product Options**

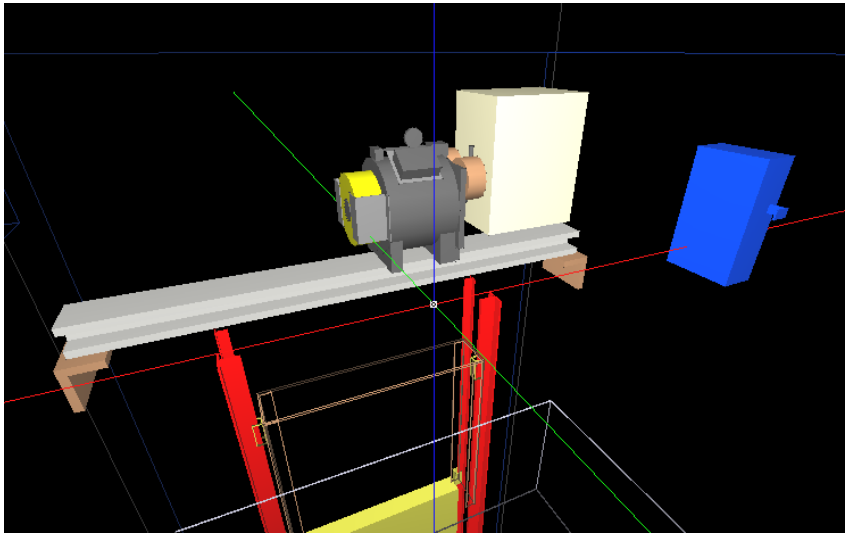




MRL Gear Base Construction Unit

- After customizing the corresponding component properties and dimensions
  - Profile position, length, height, etc.





Practical Examples

Traction Elevators – L-Type Car Frames

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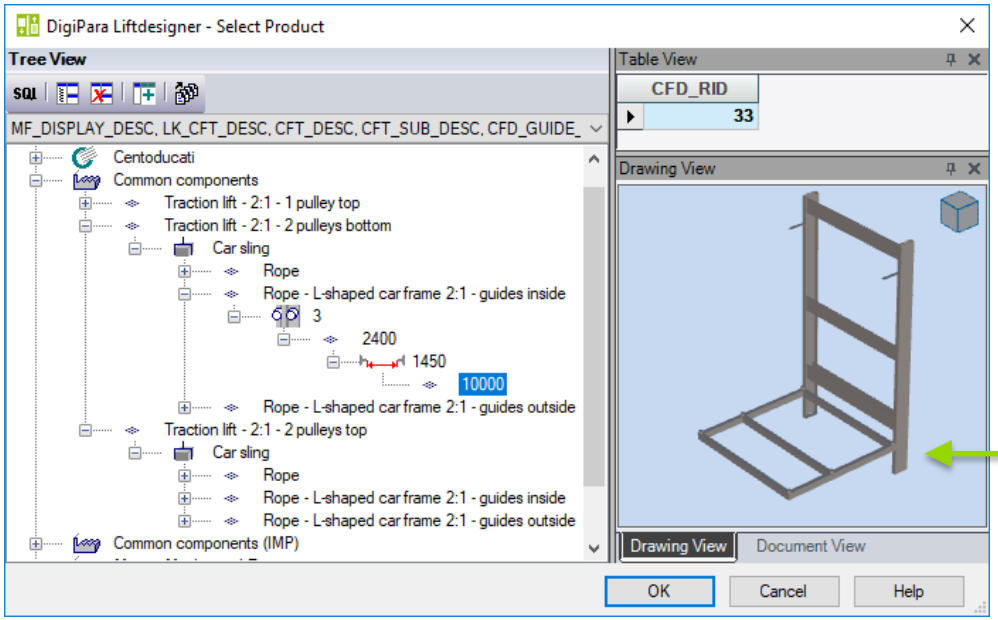
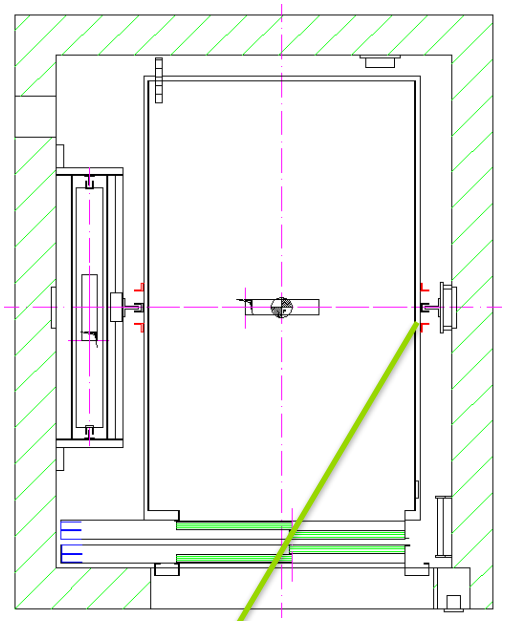
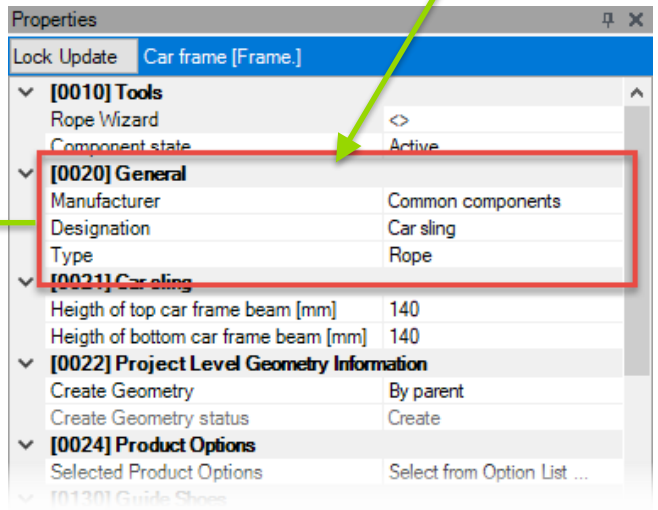
L-Type Car Frames

- Must be selected manually
  - For non MRL elevators after the shaft wizard has been finished
  - Via the Component Navigator

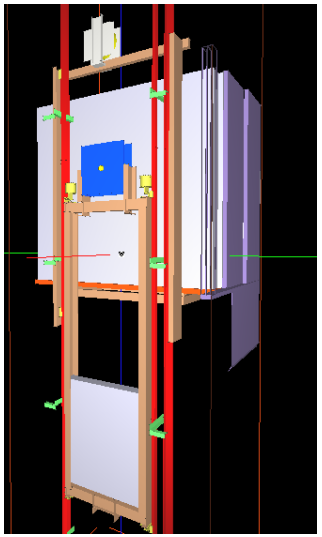


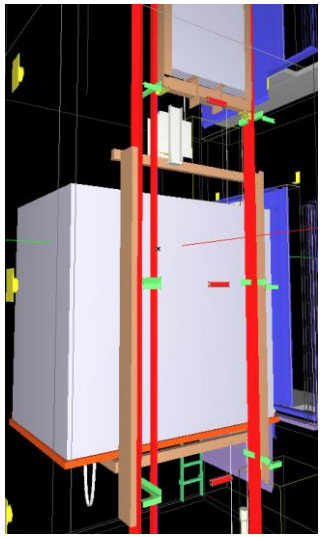


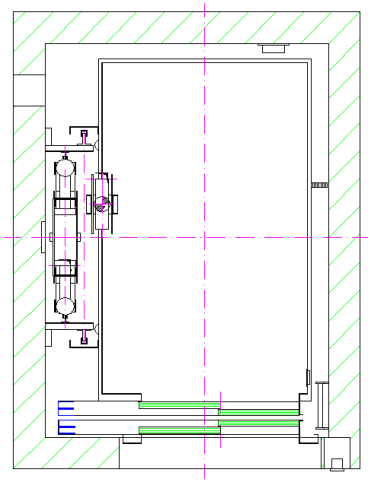


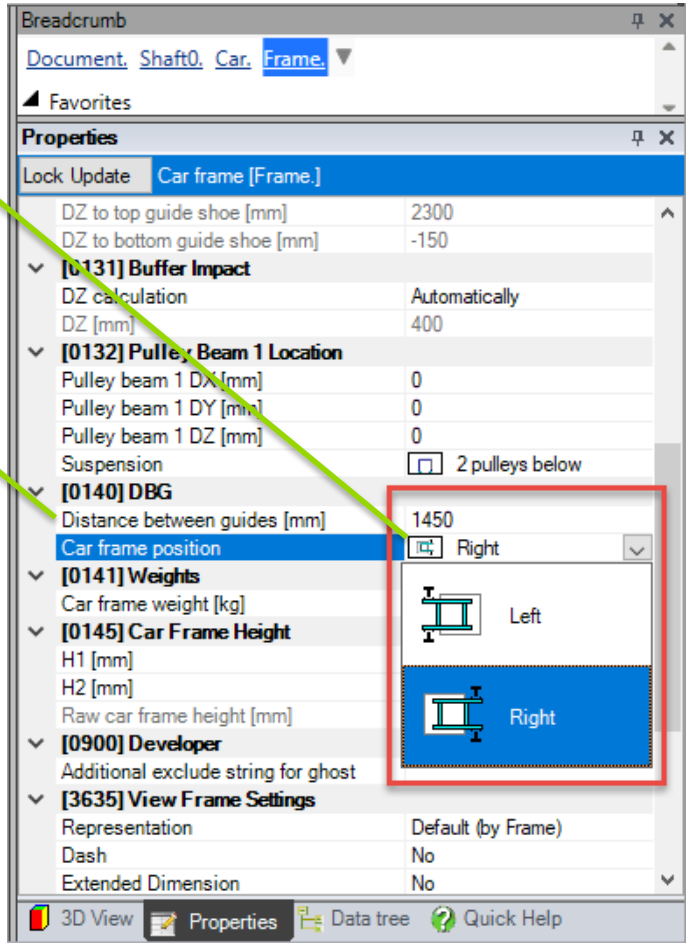
L-Type Car Frames

- Possible result after exchanging the car frame and the following, additional changes
  - Changing the car frame location
  - Modifying the rail brackets
  - Defining the distance between guides









Practical Examples

Hydraulic Elevators

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Practical Examples - Hydraulic Elevator

- Cylinder Selection
- Rail Bracket Fixing Options
- MRL

Practical Examples

Hydraulic Elevators – Cylinder Selection

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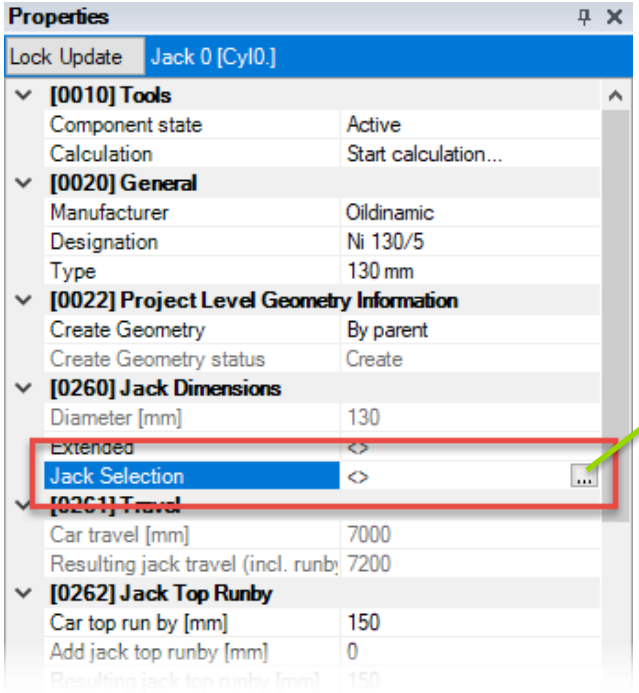
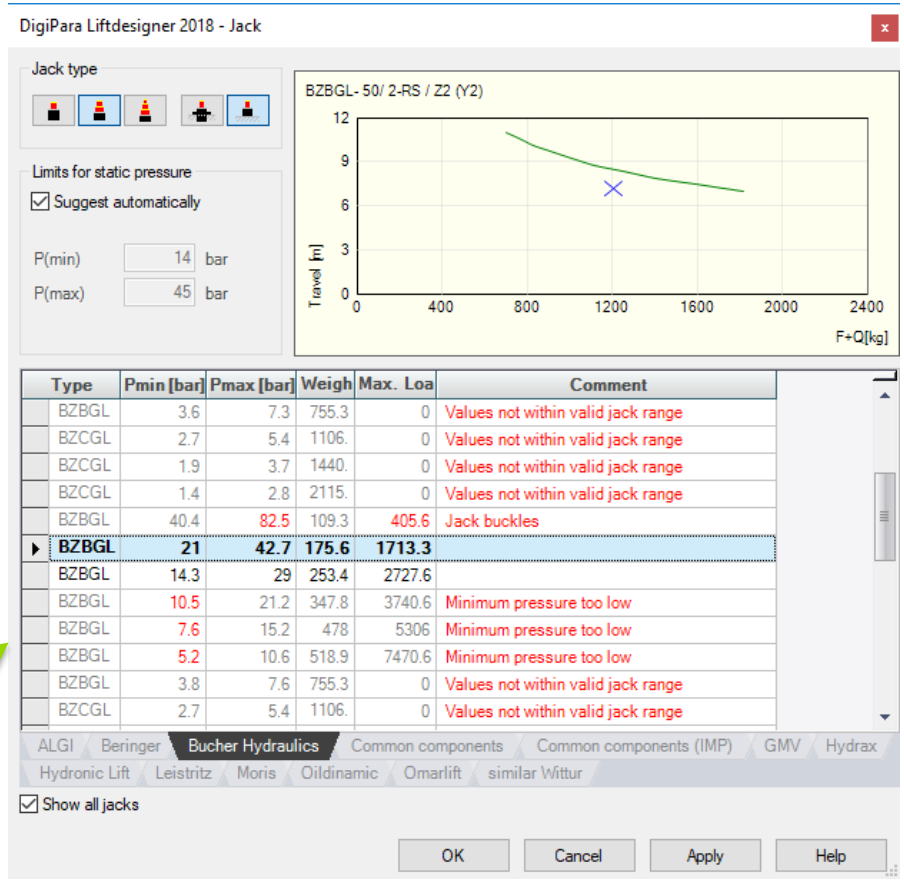
Cylinder Selection

- Via the Cylinder dialog
  - Which gets activated via the Cylinder Selection property





You'll need to add the correct weight to the cabin first, otherwise the min. cylinder pressure will display a wrong value!

Cylinder Selection

- Selecting the Cylinder type
  - Borehole- / Cantilevered Cylinder
  - 1-, 2-, 3-stage
- Specifying the limits for static pressure
  - Filter the available cylinders according to the specified range
- Selecting manufacturer specific Cylinders
  - ALGI, Bucher, GMV, Moris, etc.

Practical Examples

Hydraulic Elevators – Rail Bracket Fixing Options

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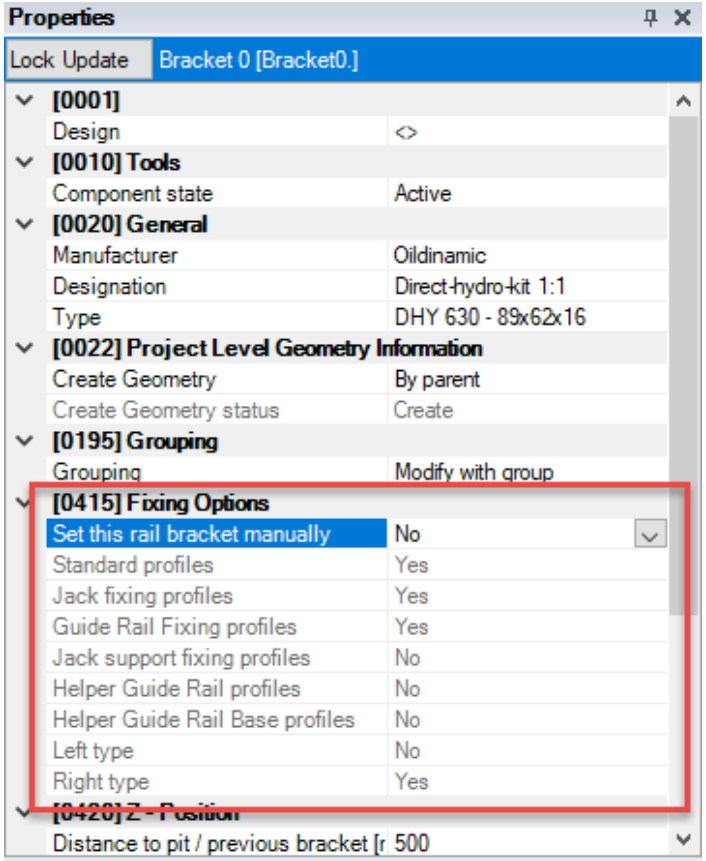
Rail Bracket Fixing Options

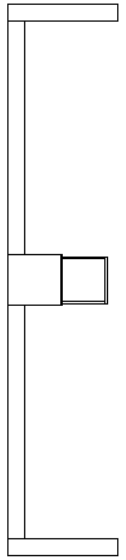
- Can be configured manually via the corresponding component properties
- A rail bracket can consist of one or more predefined fixing profile groups (similar to Product Options), e.g.
  - Standard profiles
  - Cylinder fixing profiles
  - Guide rail fixing profiles
  - etc.



Rail Bracket Fixing Options

- Switching off the Jack fixing profiles of the selected rail bracket

[0020] General	
Manufacturer	Oildinamic
Designation	Direct-hydro-kit 1:1
Type	DHY 630 - 89x62x16
[0022] Project Level Geometry Information	
Create Geometry	By parent
Create Geometry status	Create
[0195] Grouping	
Grouping	Modify with group
[0415] Fixing Options	
Set this rail bracket manually	No
Standard profiles	Yes
Jack fixing profiles	Yes
Guide Rail Fixing profiles	Yes
Jack support fixing profiles	No
Helper Guide Rail profiles	No
Helper Guide Rail Base profiles	No
Left type	No
Right type	Yes
[0420] Z - Position	
Distance to pit / previous bracket [r	500



[0020] General	
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Type	DHY 630 - 89x62x16
[0022] Project Level Geometry Information	
Create Geometry	By parent
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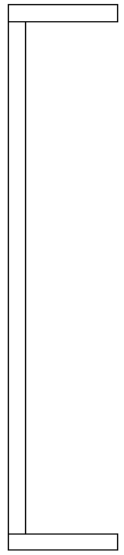
Grouping	Modify with group
[0415] Fixing Options	
Set this rail bracket manually	Yes
Standard profiles	Yes
Jack fixing profiles	No
Guide Rail Fixing profiles	Yes
Jack support fixing profiles	No
Helper Guide Rail profiles	No
Helper Guide Rail Base profiles	No
Left type	No
Right type	Yes
[0420] Z - Position	
Distance to pit / previous bracket [r	500



Practical Examples

Hydraulic Elevators – MRL

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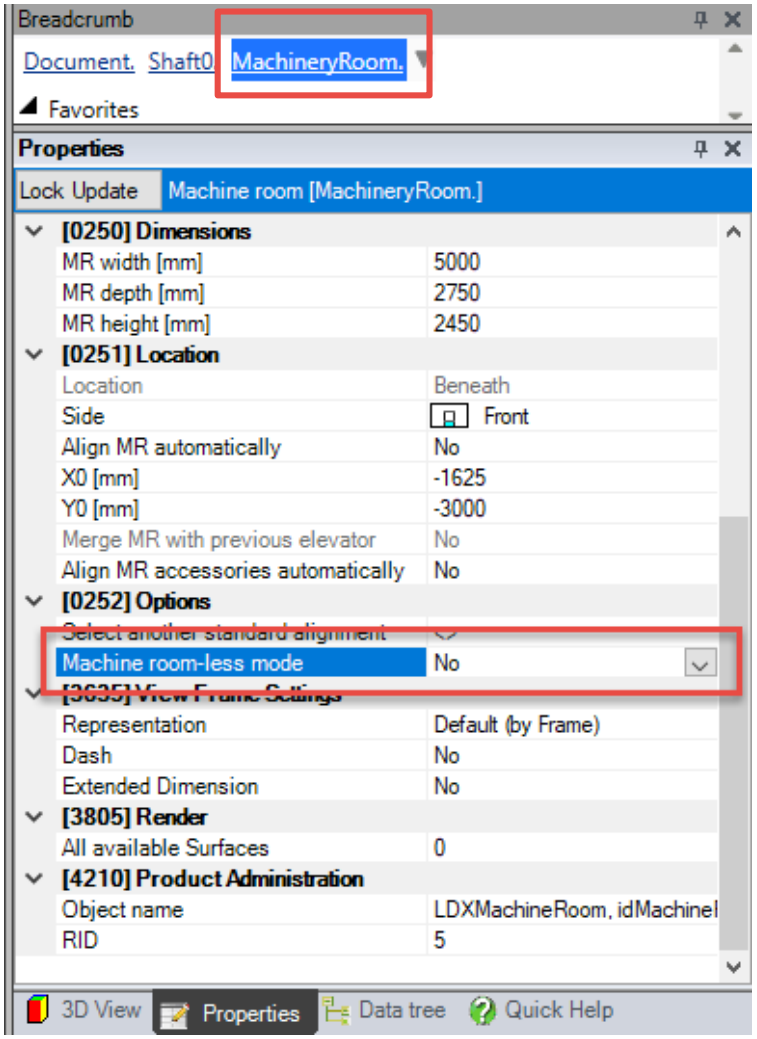
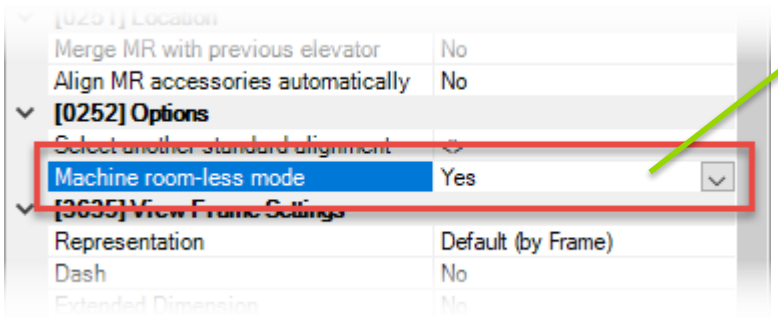
MRL

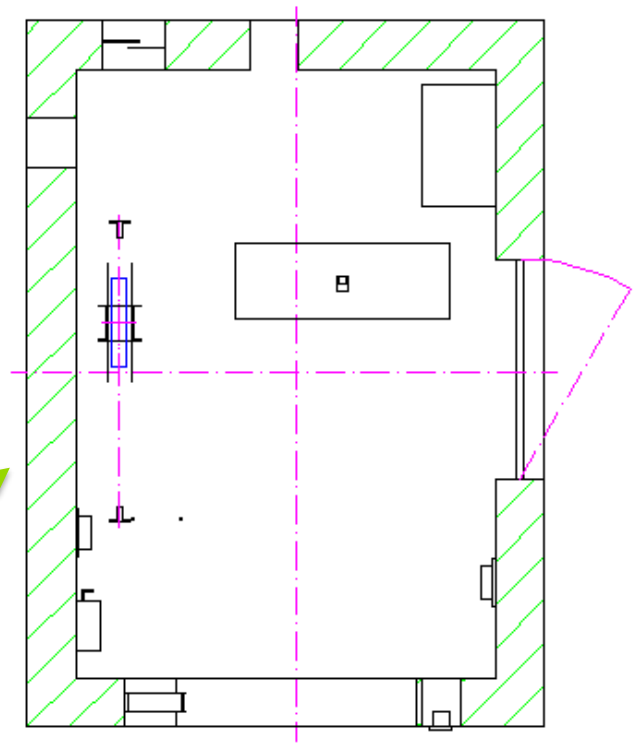
- Hydraulic elevators can be created manually
  - Via the machine room **Machine room-less mode** property



MRL

- Machine room components are placed in the shaft pit automatically
  - They can be deleted, moved via the corresponding dimensions and component properties





Shaft Groups

YouTube: Creating shaft groups

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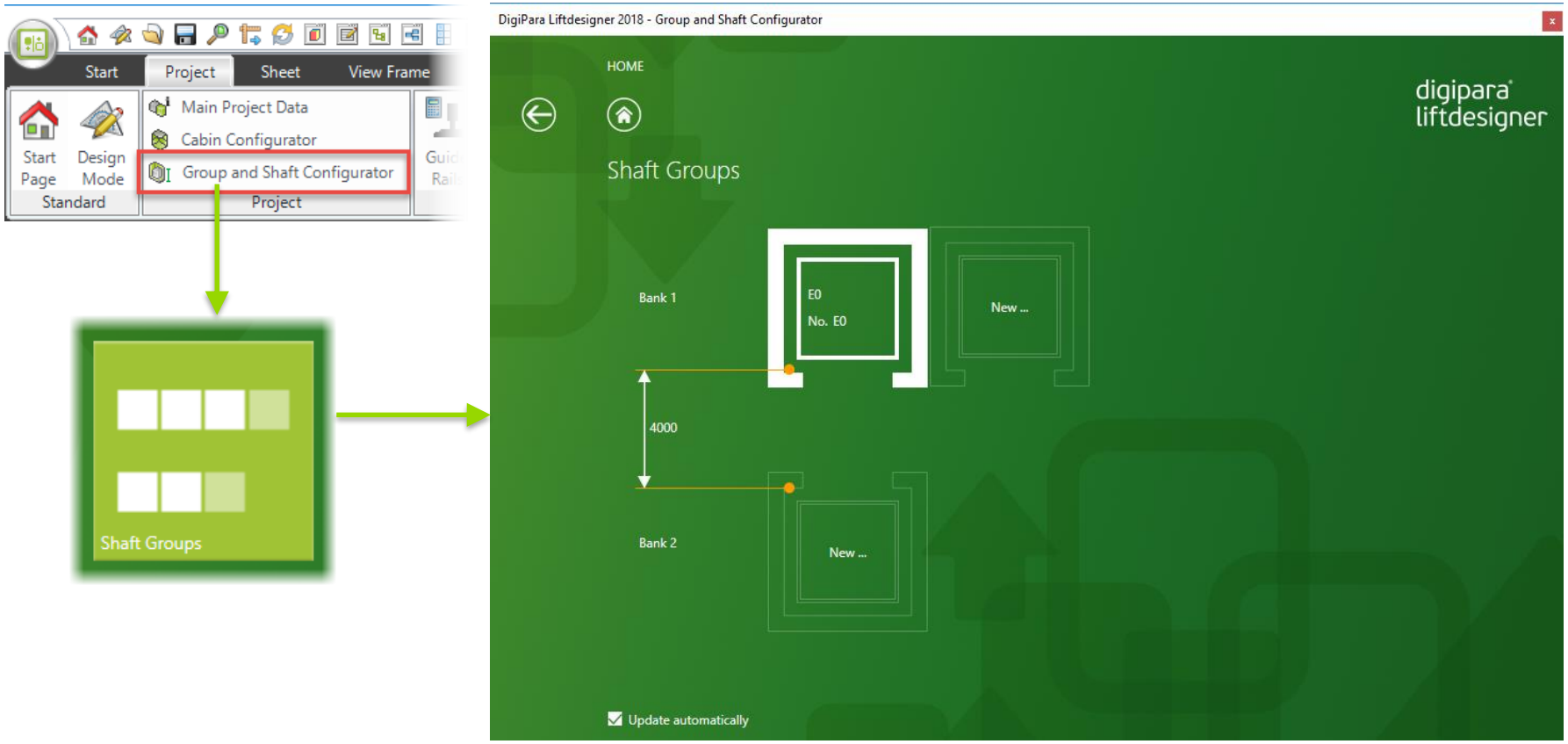
Shaft Groups

- Copy and add Shafts
- Group Shaft Wall Opening
- Machine Room

Shaft Groups

- Define Group Elevators via the Group and Shaft Configurator



Shaft Groups

Copy and add Shafts

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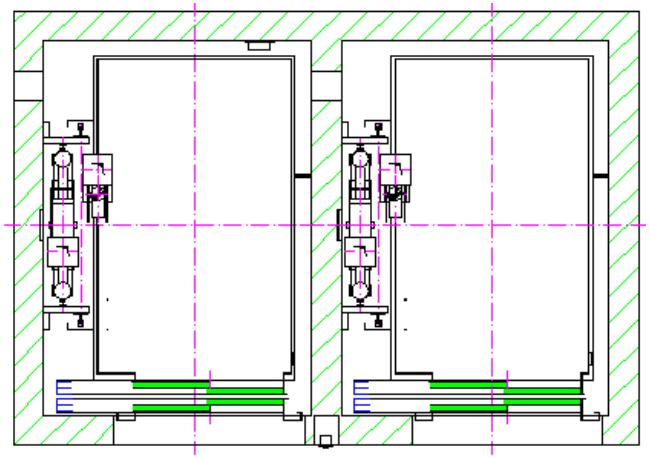
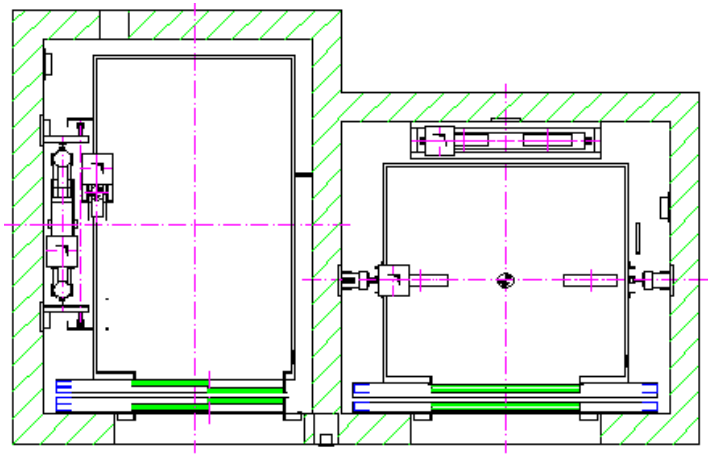
Shaft Groups – Copy and add

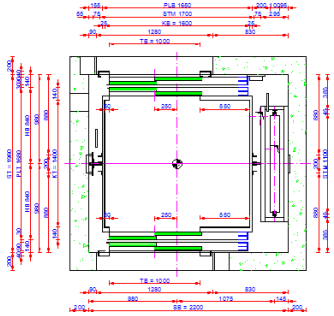
- Group elevators can be created via a shaft copying operation or via the group shaft wizard (similar to the standard shaft wizard)
  - Shaft copying operation -> for identical elevators in the group
  - Group shaft wizard -> for different elevators in the group
  - The copied/ added shaft, incl. all shaft components, is completely independent from the initial shaft



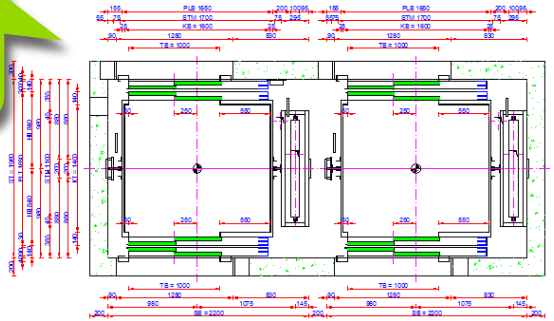


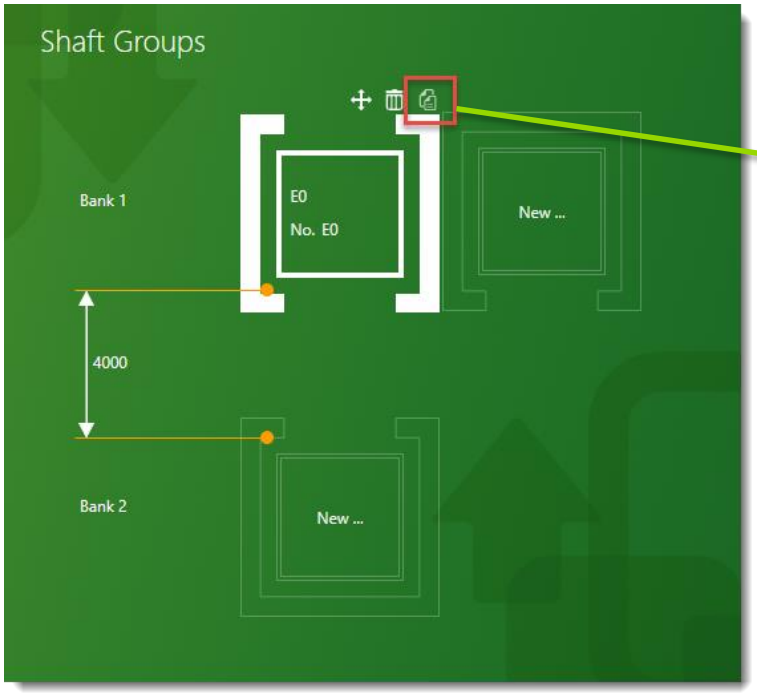
Shaft Groups – Copy Shafts

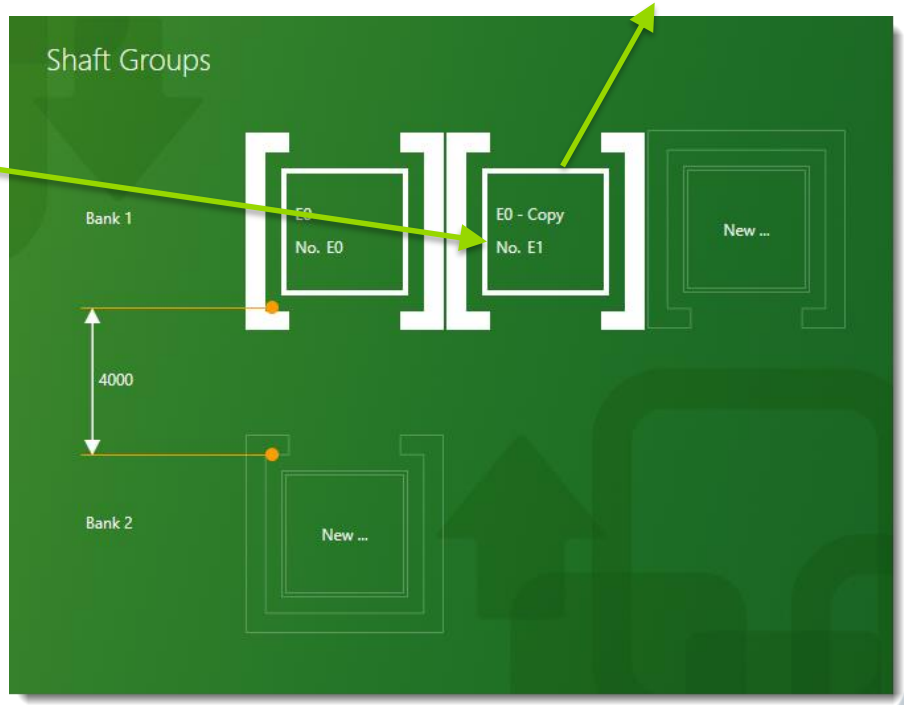
- Creating a group elevator via the shaft copying operation



Shaft groups are separately editable.

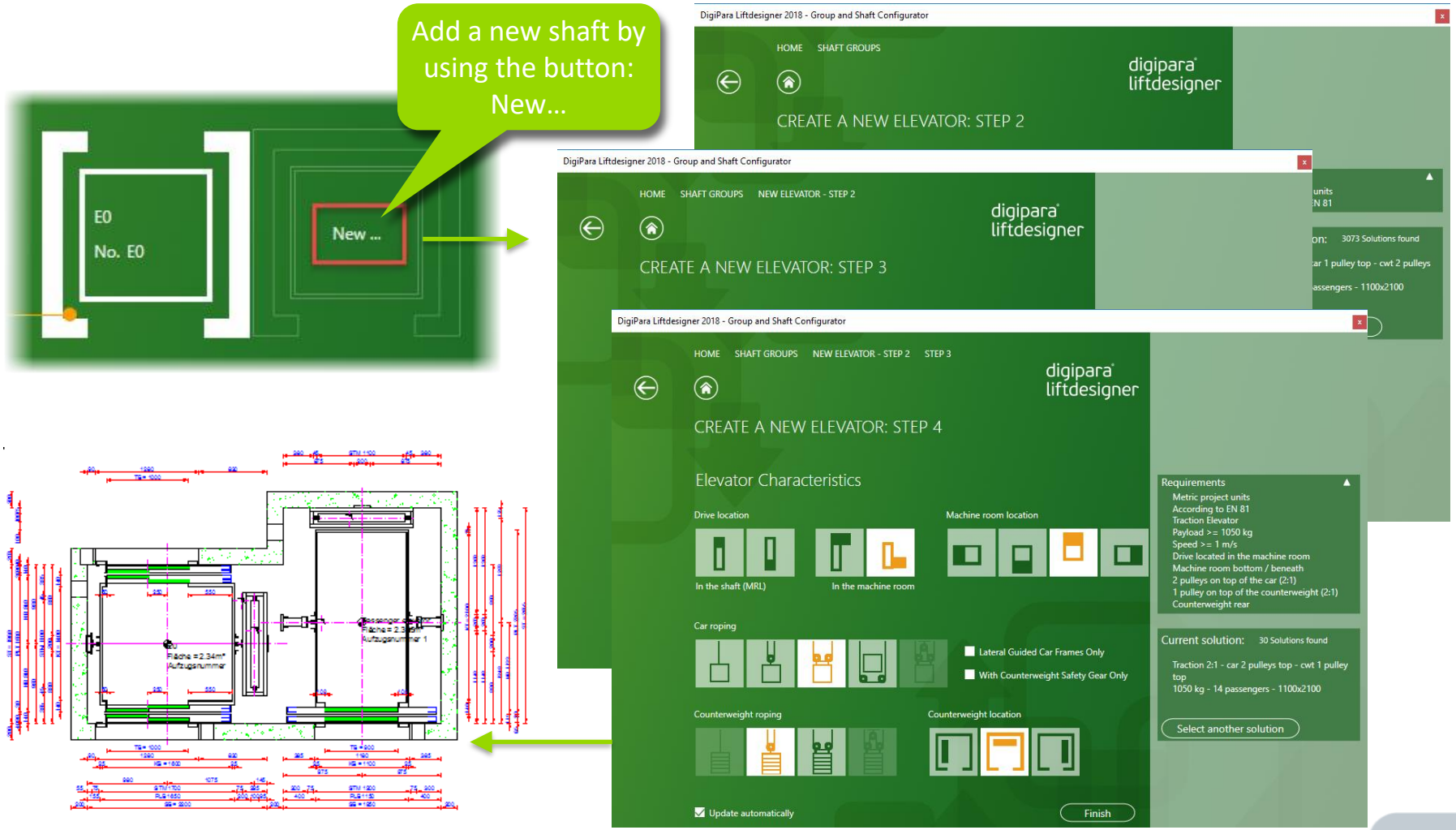






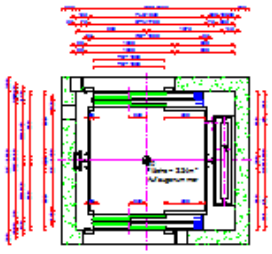
Shaft Groups - Add Shafts

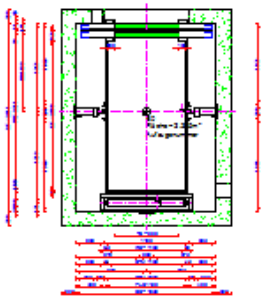
- Creating a group elevator via the group shaft wizard



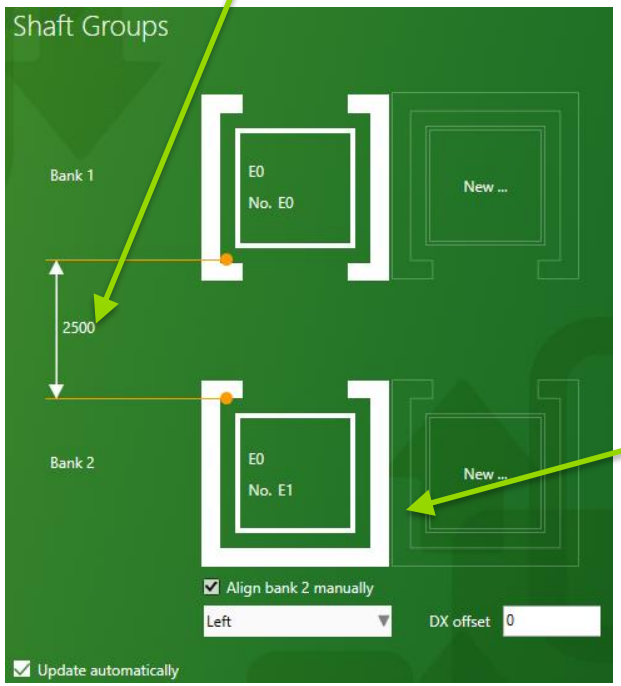
Shaft Groups - General

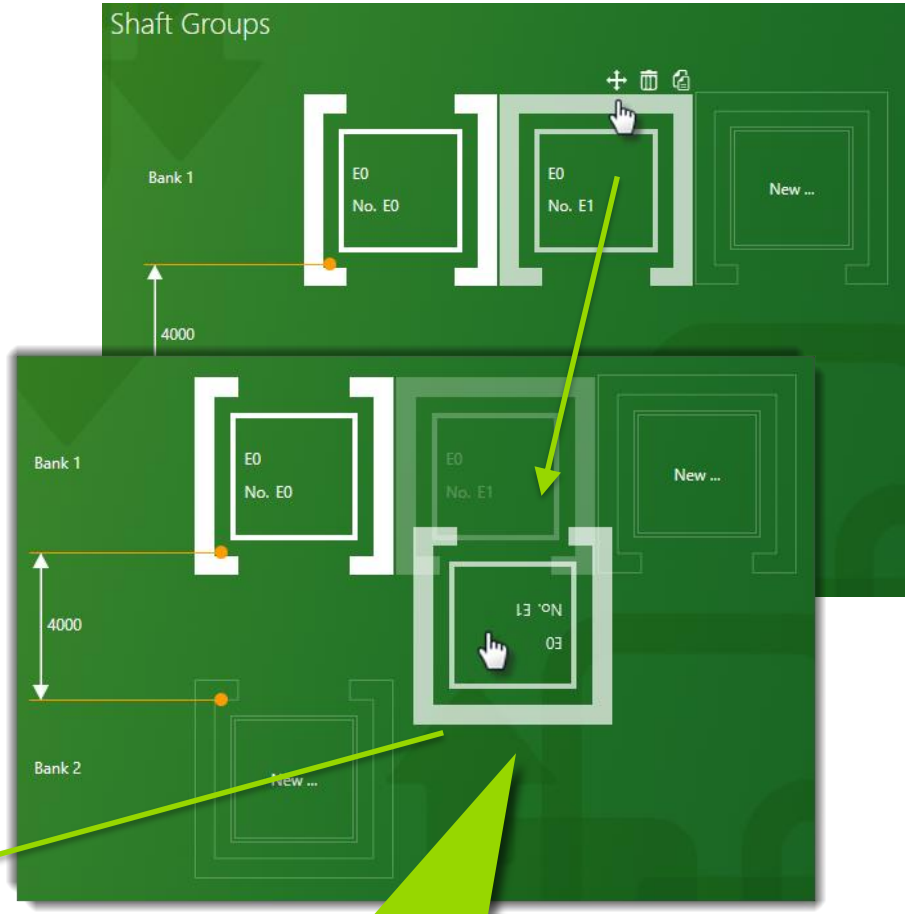
- Change the location of an existing group shaft





You can change the face-to-face distance between the shafts.

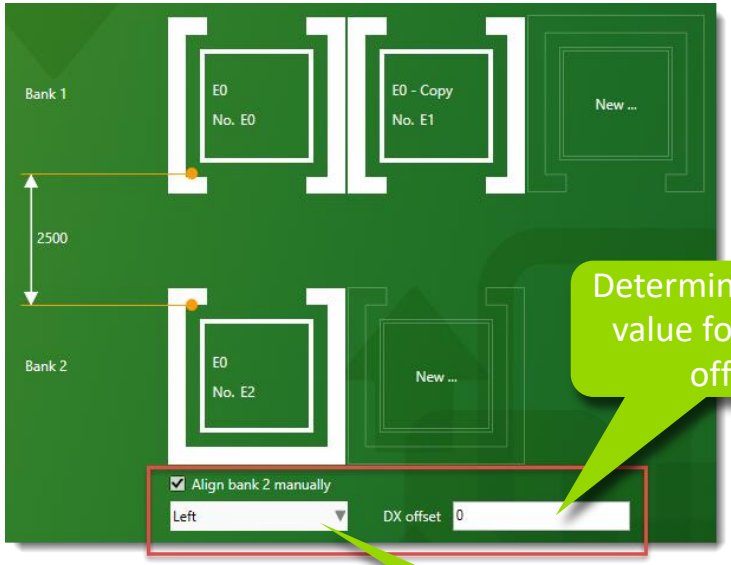




Hold the left mouse button and move the selected shaft to a new position.

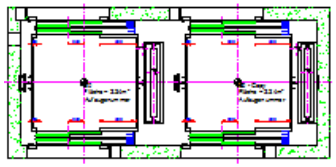
Shaft Groups - General

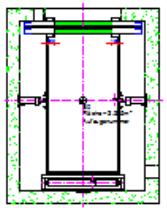
- Face-to-Face alignment options



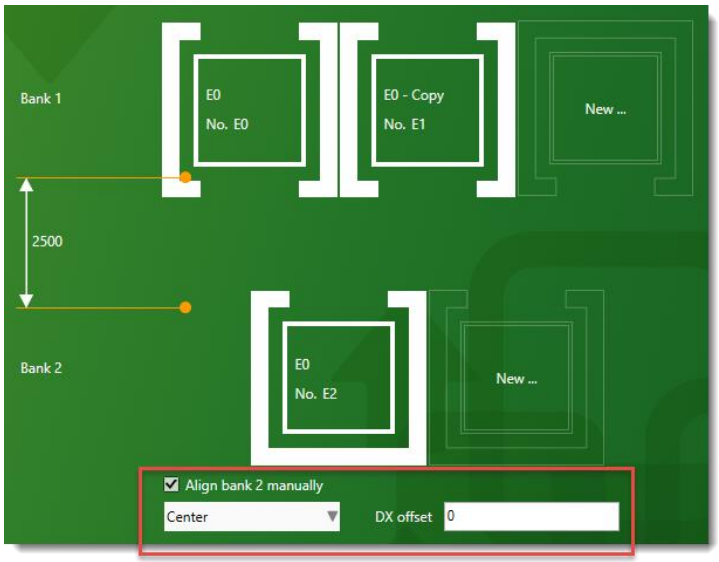
Determine an own value for the DX offset

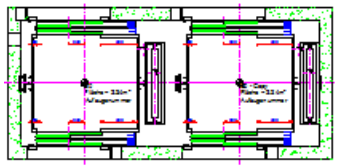
Alignment manually: Left, Center or Right

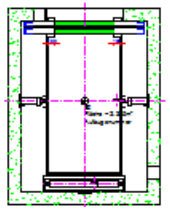




Example: aligment left







Example: aligment centre

Shaft Groups

Group Shaft Wall Opening

YouTube: Removing and adding group shaft wall openings

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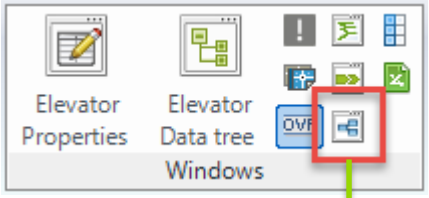
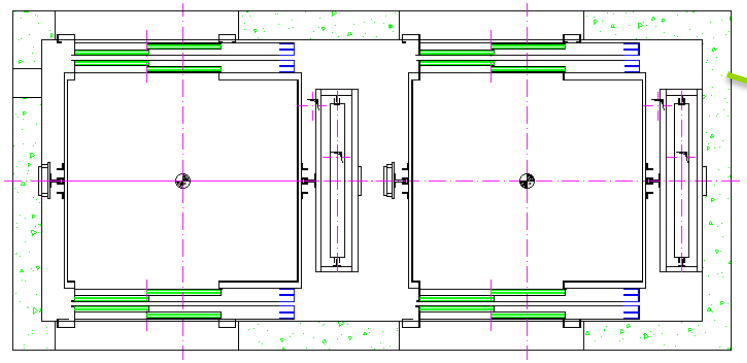
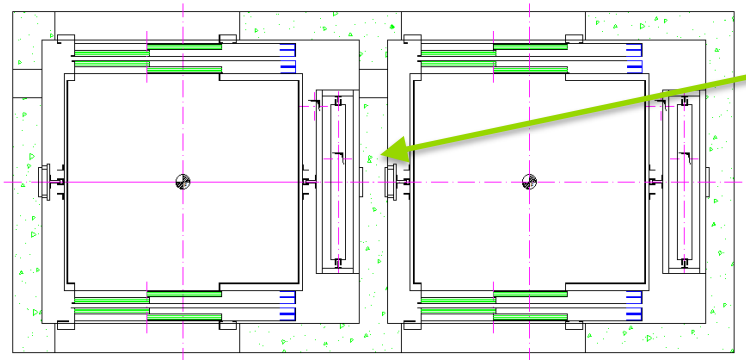
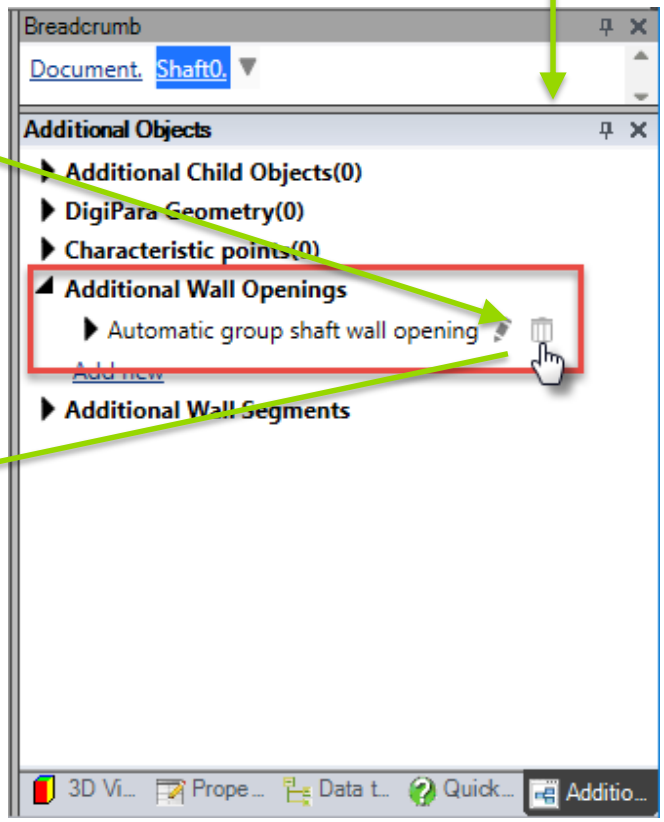
Group Shaft Wall Opening

- Automatically gets created when adding a new elevator to the group
  - Removing the wall opening via the Additional Objects Docking Window









Shaft Groups

Machine Room

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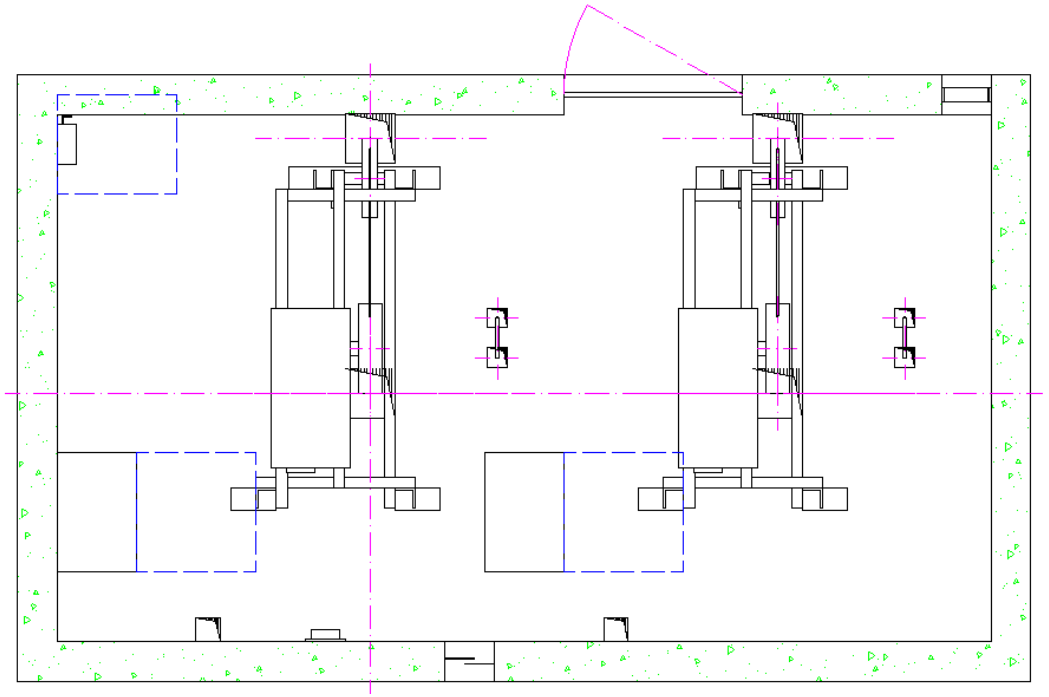
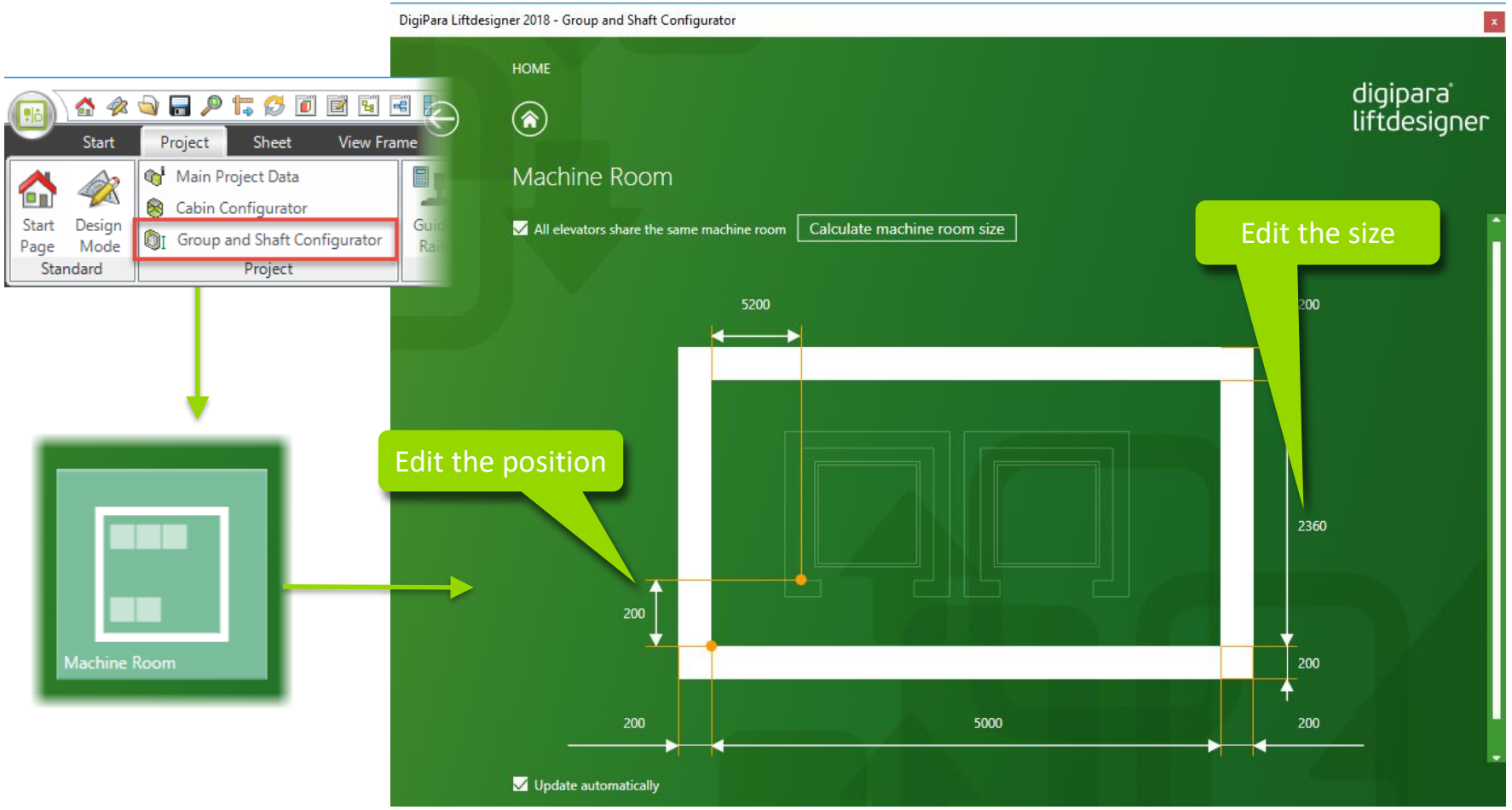
Shaft Groups - Machine Room

- Adding a new elevator to the group
  - Machine rooms are merged
  - Autom. removes double, unnecessary MR components like:
    - 2nd. ventilation window
    - 2nd. MR door
    - etc.



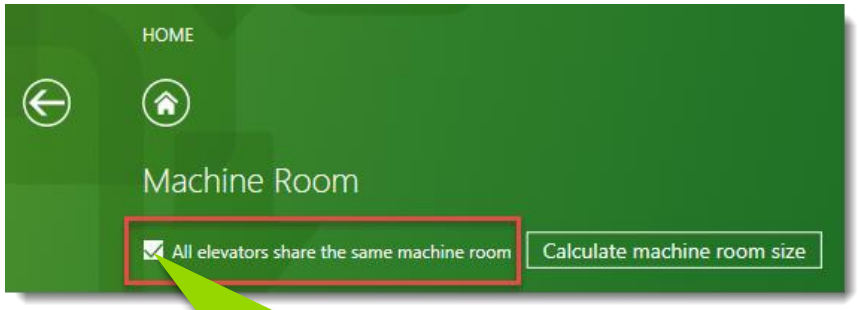
Shaft Groups - Machine Room

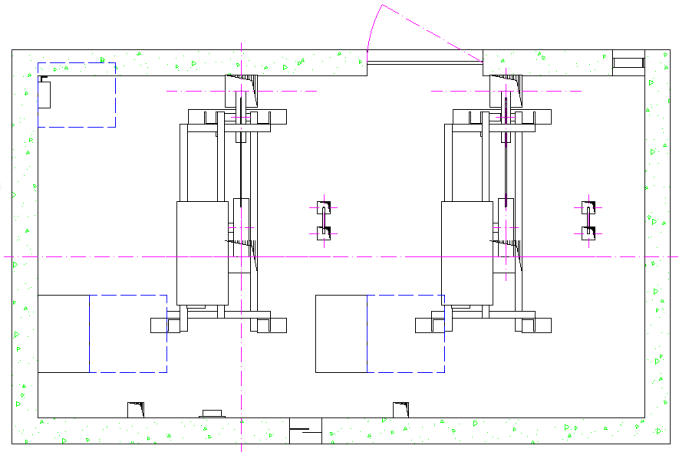
- Definition via the Group and Shaft Configurator



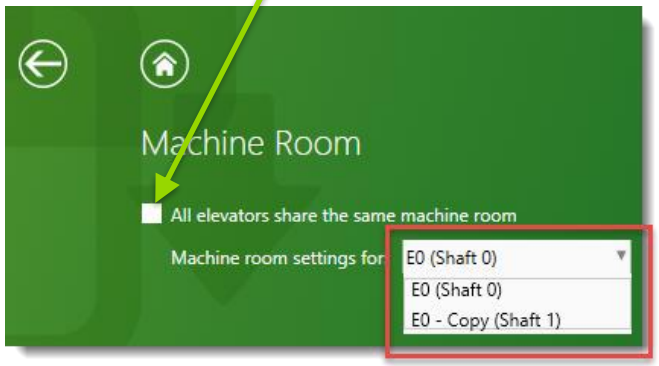
Shaft Groups - Machine Room

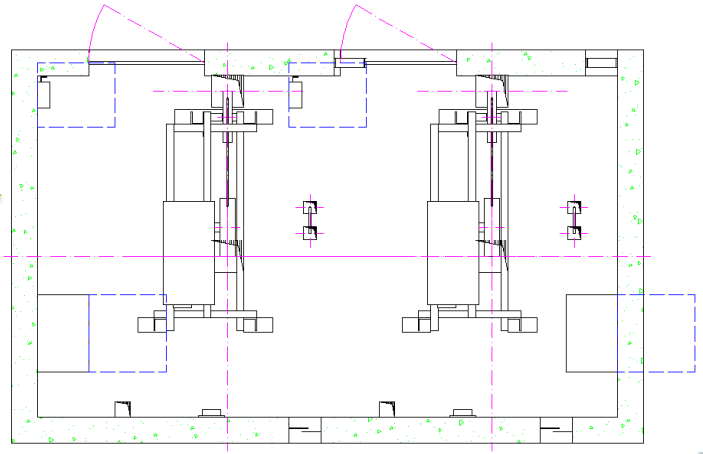
- Individual setting for each shaft
  - Adds all standard machine room components automatically





Remove the check mark for individual MR settings.





Overwrites

General

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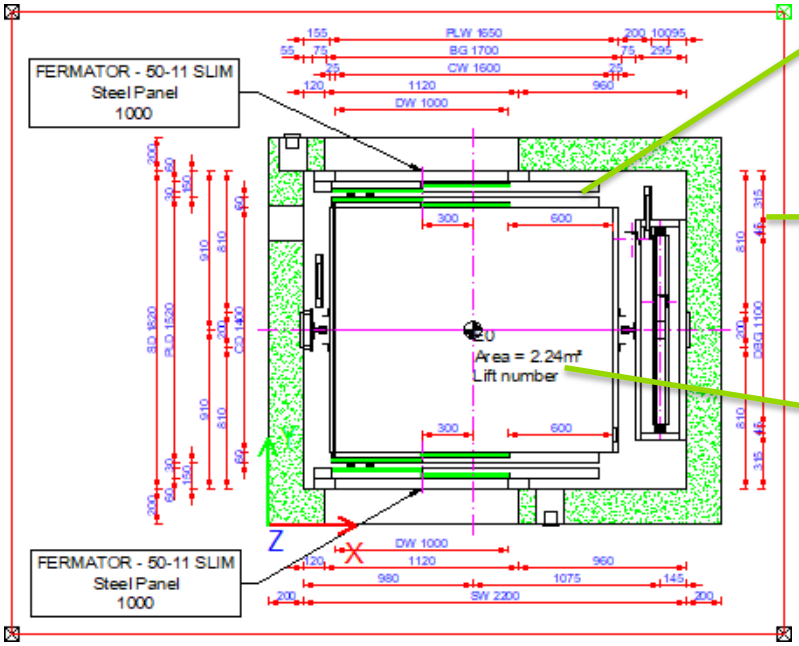
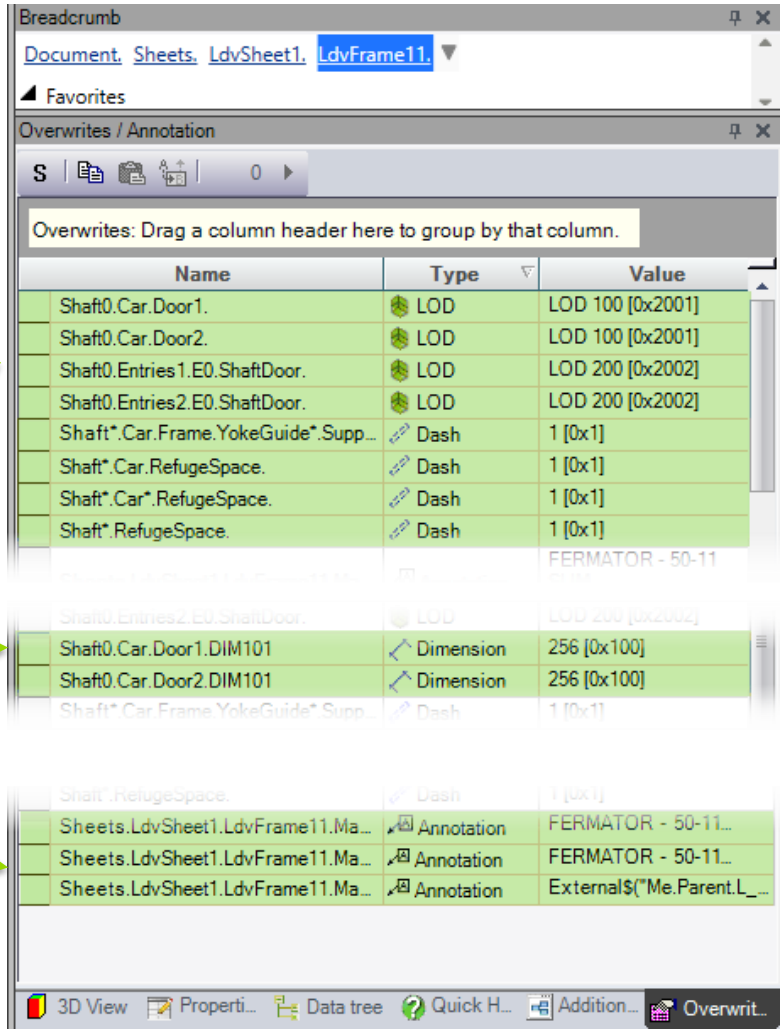
Overwrites - General

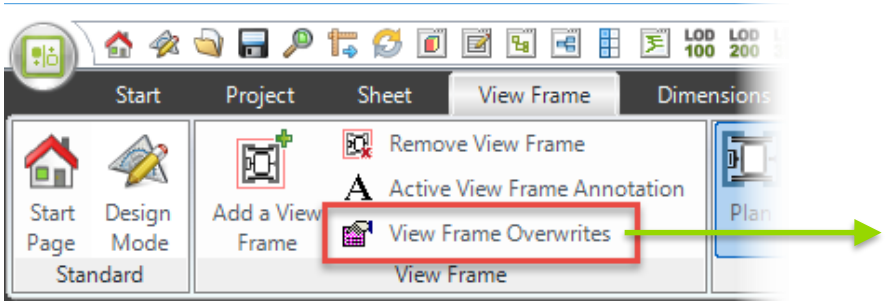
- All view frame changes are stored in an overwrites list e.g.
  - Annotation changes
  - Component changes
  - Dimension changes

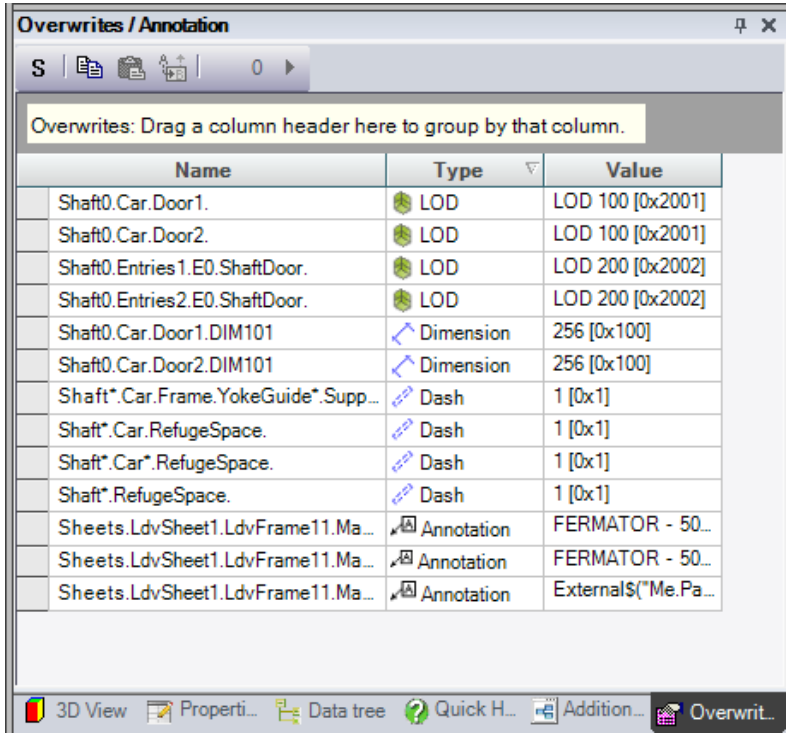




Overwrites - General

- The Overwrites docking window can be activated via the corresponding item in the View Frame Ribbon Group

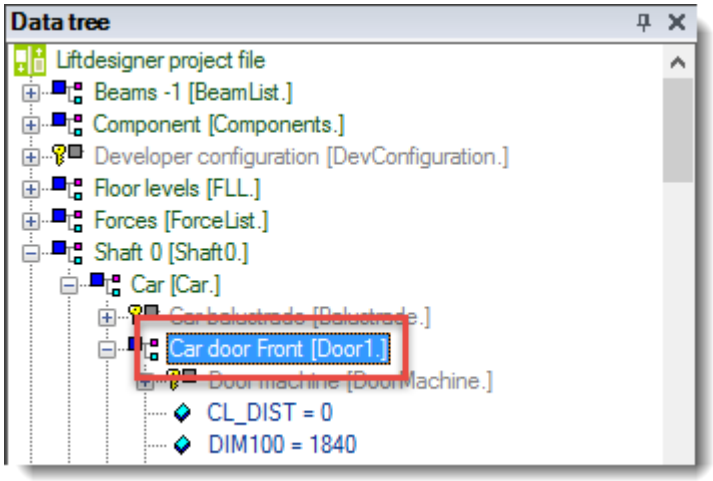




Overwrites - General

- The overwrite name is equal to the data tree name of the corresponding object
- It is build of the names of the object and its parents, e.g.

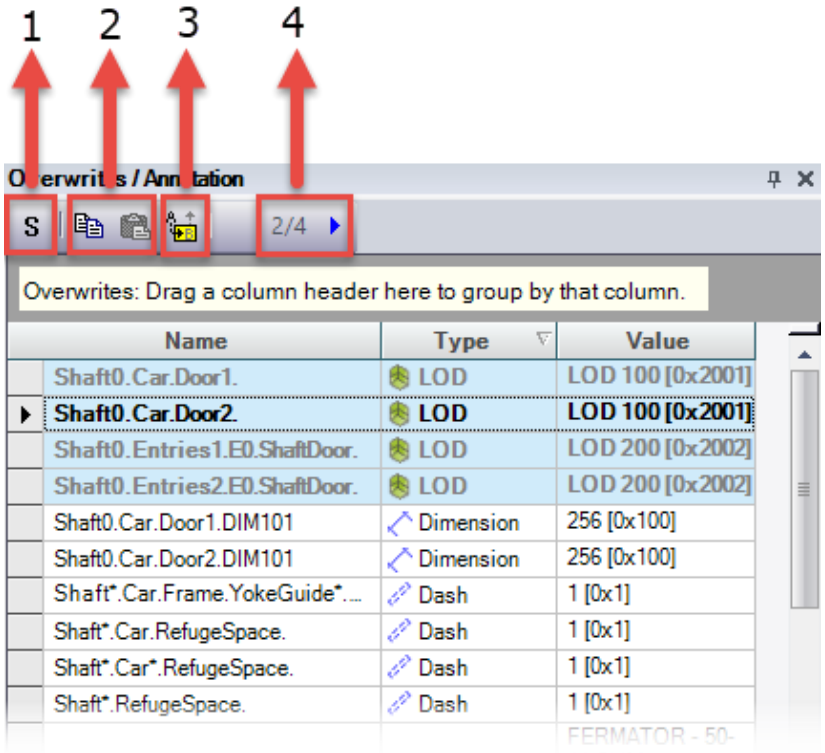
"Shaft0.Car.Door1."



Overwrites - General

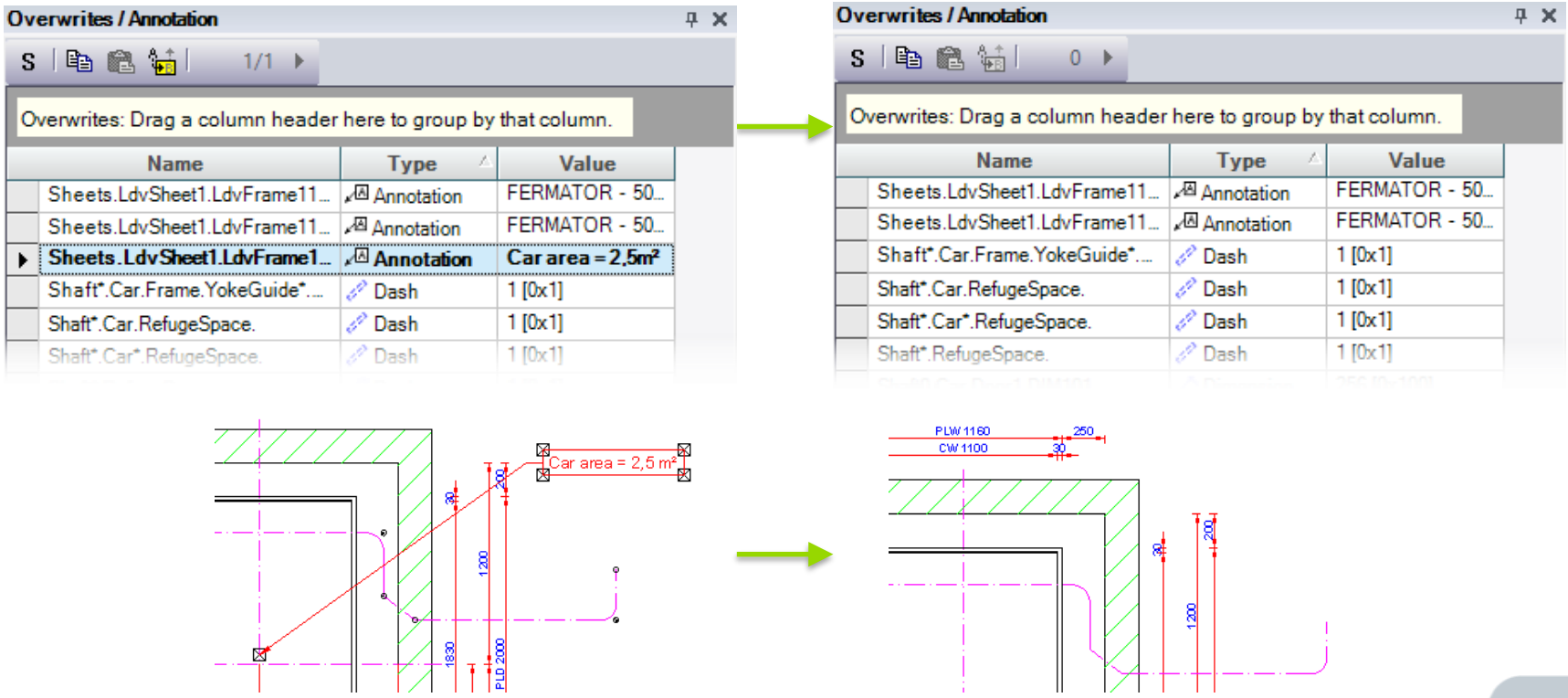
- Toolbar

1. Selects the object in the drawing which is concatenated to the selected overwrites entry
2. Copy and Paste a selected overwrite entry/ entries
3. Replace a certain term in the selected overwrite entry/ entries (no copying operation)
4. Switch between the selected overwrite entries (highlighted yellow)



Overwrites - General

- Can be reset by deleting the corresponding item from the Overwrites window
  - Selecting the corresponding item (highlighted yellow)
  - And removing it via the delete key



Overwrites

Dimension Overwrites

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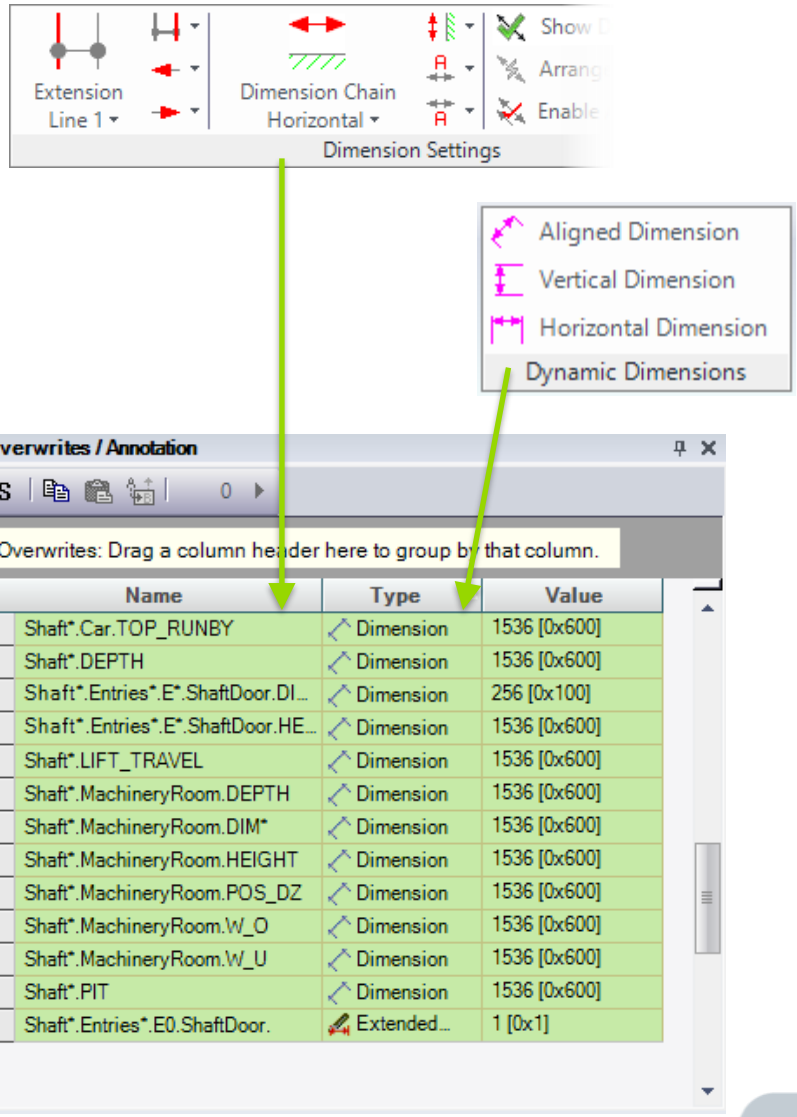
Dimension Overwrites

- Dimension overwrites are created when e.g.
  - Deleting a dimension from the view
  - Changing dimension settings
    - Changing the extension lines
    - Changing the dimension text settings
    - Changing the dimension position
    - etc.
  - Moving dimensions
  - Changing dimension prefixes
  - Create own dyn. dimensions
  - etc.



Overwrites

Component Overwrites

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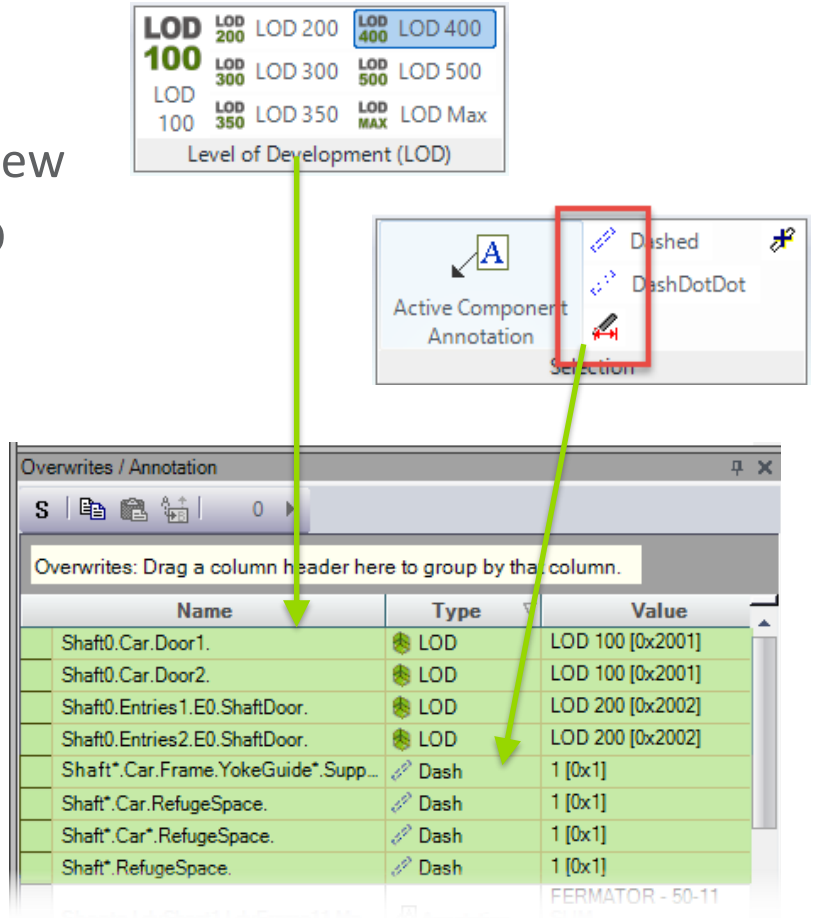
Component Overwrites

- Component overwrites are created when e.g.
  - Deleting a component from the view
  - Changing the presentation or LOD
    - Dashed
    - DashDotDot
    - LOD 100 - 500
    - LOD MAX
    - etc.
  - Enabling extended component dimensions
  - etc.



Overwrites

Annotation Overwrites

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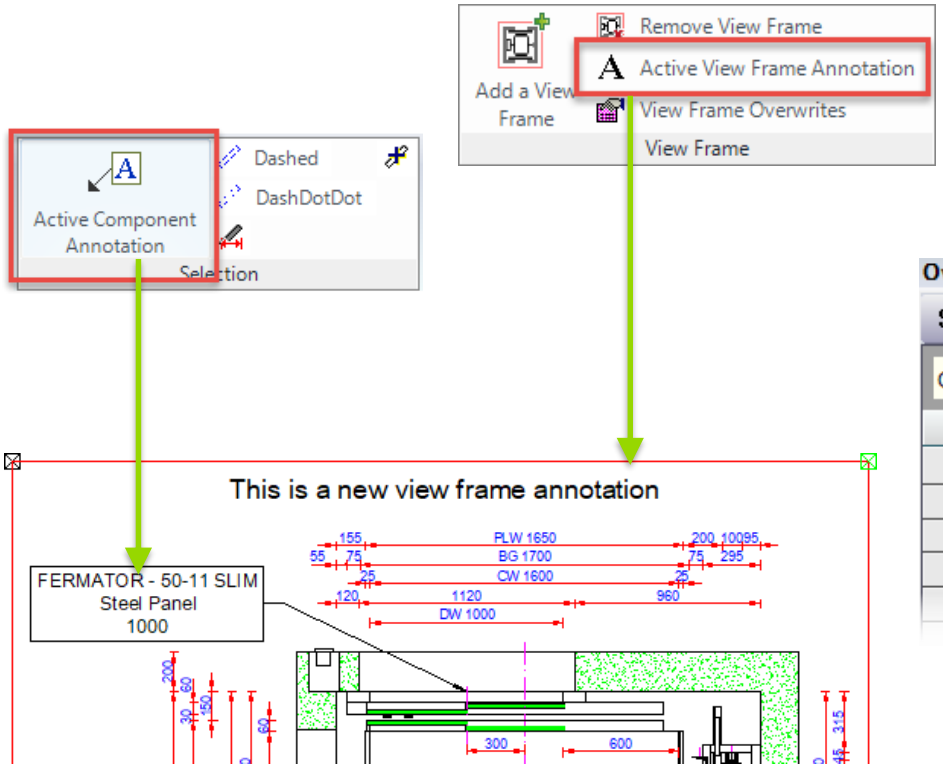
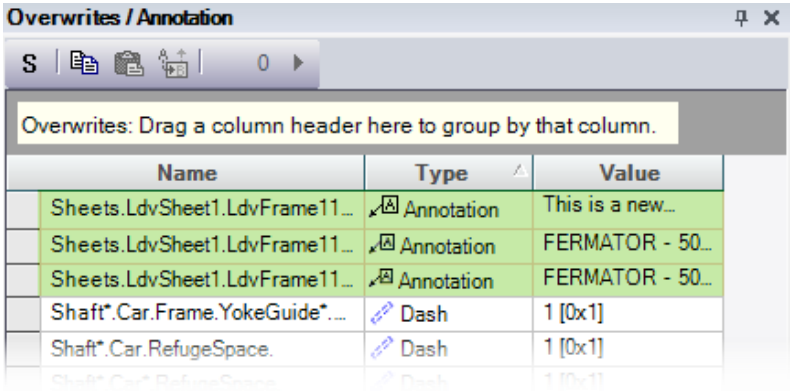
Annotation Overwrites

- Annotation overwrites are created when
  - Adding a component annotation
  - Adding a view annotation



Hint: Each view frame has it's own overwrite list



Overwrites

The *Operator

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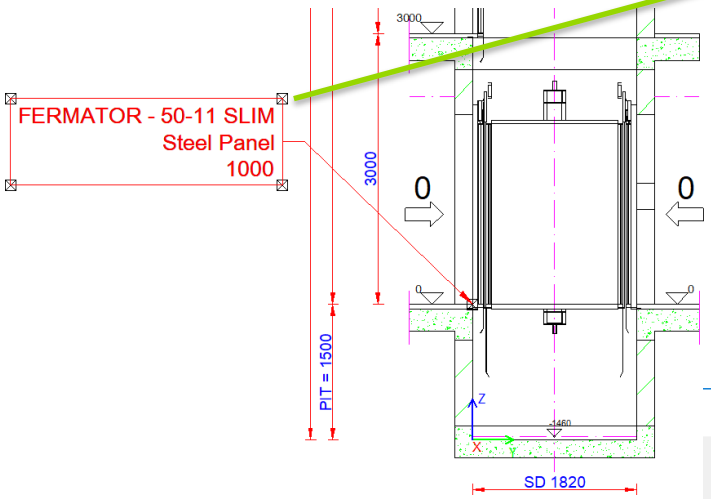
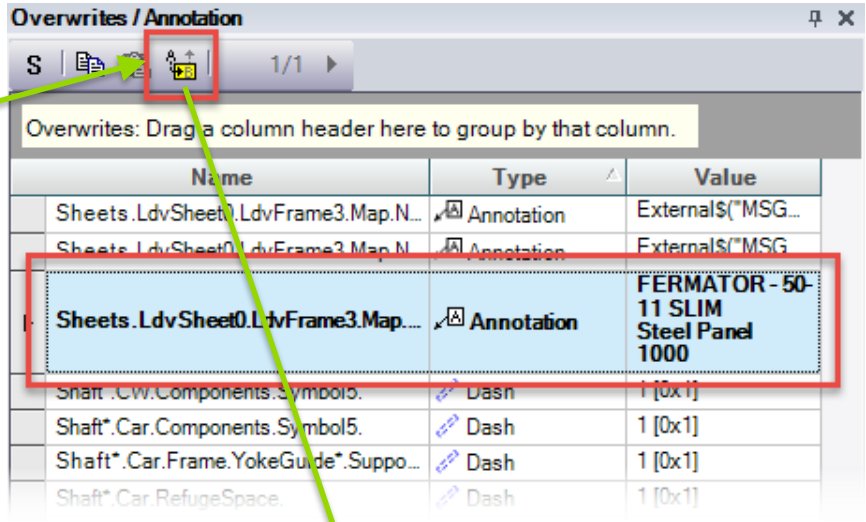
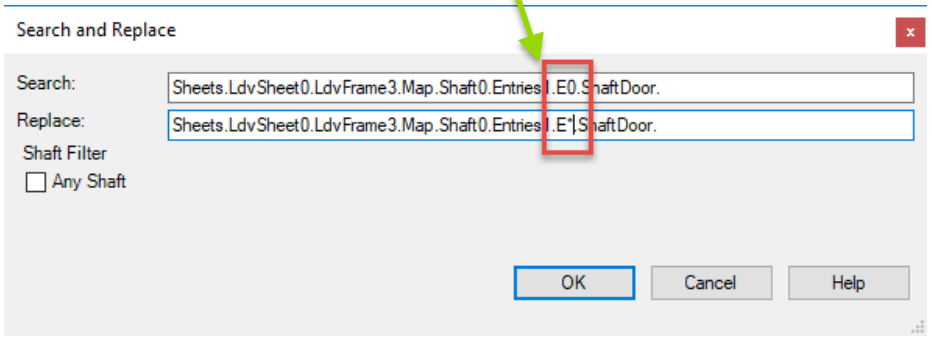
The *Operator

- Provides the opportunity to assign an overwrite to all childs of a tree list object.
- Works for all objects (dimensions, annotations, BIM components)







The *Operator

Breadcrumb

Document. Sheets. LdvSheet0. LdvFrame3. Map. Shaft0.Entries1.E*.ShaftDoor.

Favorites

Overwrites / Annotation

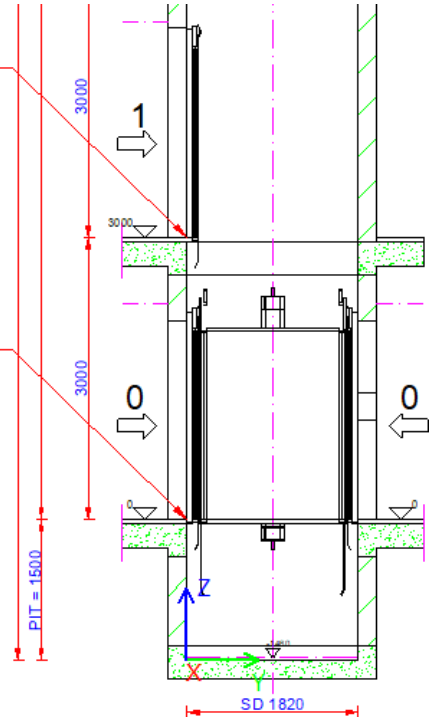
S 1/1

Overwrites: Drag a column header here to group by that column.

Name	Type	Value
Sheets.LdvSheet0.LdvFrame3.Map.NOTE#DESC	Annotation	External$("MSGG RP0.MSG640")
Sheets.LdvSheet0.LdvFrame3.Map.NOTE#SCALE	Annotation	External$("MSGG RP0.MSG4"): External$("LdvFra me.SCALETEXT")
Sheets.LdvSheet0.LdvFrame3.Map.Shaft0.Entries1.E*.S...	**Annotation**	**FERMATOR - 50-11 SLIM Steel Panel 1000**
Shaft*.CW.Components.Symbol5.	Dash	1 [0x1]
Shaft*.Car.Components.Symbol5.	Dash	1 [0x1]
Shaft*.Car.Frame.YokeGuide*.Support0.SH0.	Dash	1 [0x1]
Shaft*.Car.RefugeSpace.	Dash	1 [0x1]
Shaft*.Car*.RefugeSpace.	Dash	1 [0x1]
Shaft*.RefugeSpace.	Dash	1 [0x1]

FERMATOR - 50-11 SLIM Steel Panel 1000

FERMATOR - 50-11 SLIM Steel Panel 1000



Replacing the index no. of the entry item (E0) with the * operator (E*).

Practice - The *Operator

- Open the Overwrites window first and create a project with entrances on the front and on the rear side of the shaft

1. Add a vertical View to the left side

2. Delete the bottom landing door at the front wall.
   - Look up the new entry for the door delete operation in the Overwrites window

3. Assign the delete operation to all landing doors at the front and the rear wall

4. Add 2 new floors to the elevator via the Floor level dialog and activate the entrances at the front and the rear wall

Practice - The *Operator

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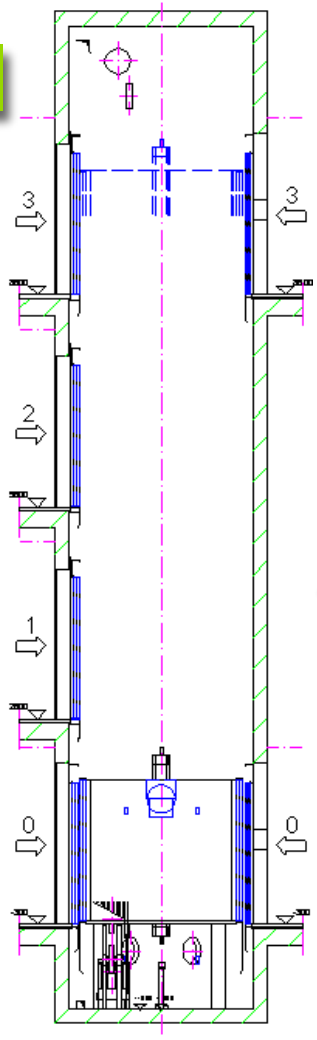
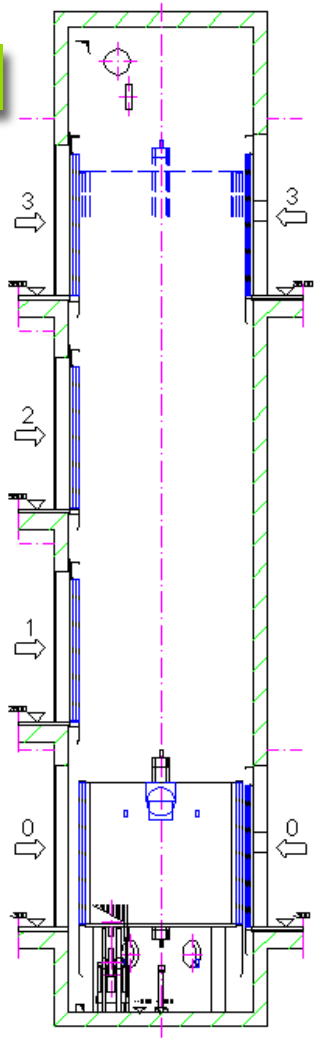
1.



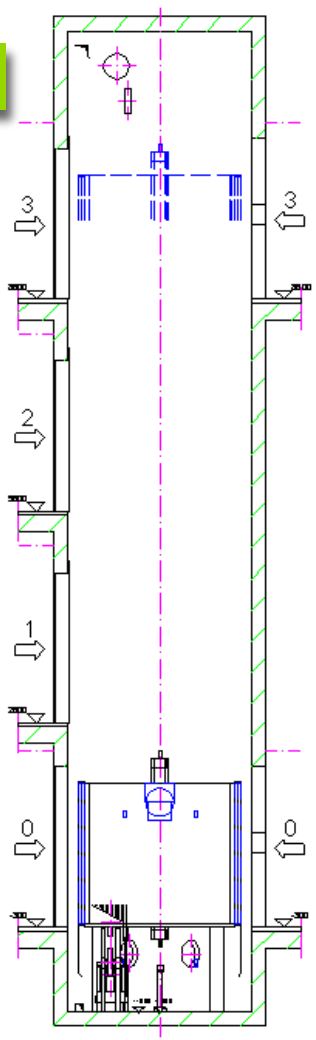
Vertical
Scale: 1:50

2.



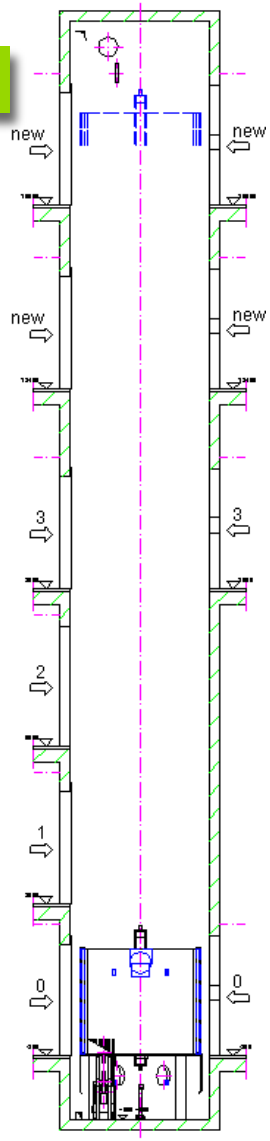
Vertical
Scale: 1:50

3.



Vertical
Scale: 1:50

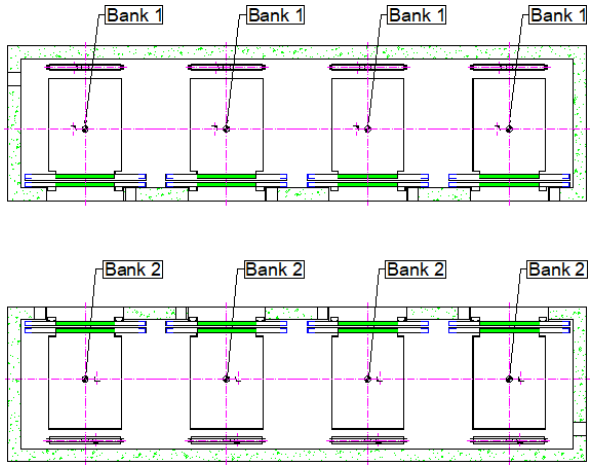
4.



Vertical
Scale: 1:50

Extended *Operator

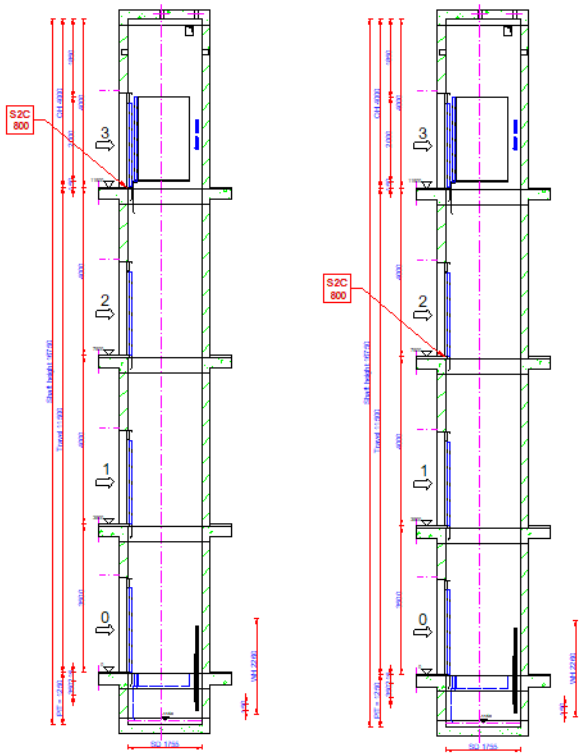
- Extended * Operator and possible combinations for more dynamical View Frames



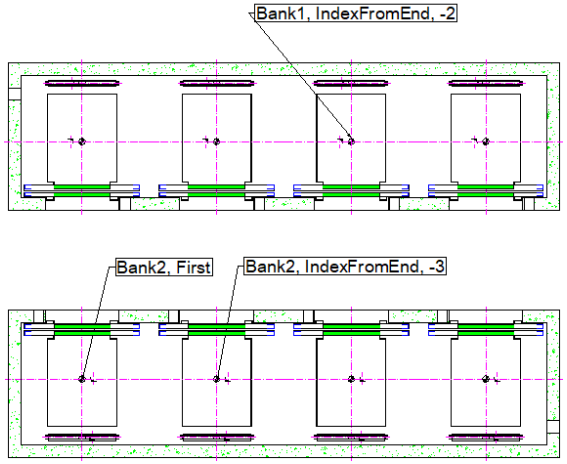
*{Bank1} / *{Bank2}

*{Last}

*{IndexFromEnd, -2}



Name	Type	Value
Sheets.LdvSheet0.LdvFrame4.Map.Shaft*{Bank2, First}.Car.	Annotation	Bank2, First
Sheets.LdvSheet0.LdvFrame4.Map.Shaft*{Bank2, IndexFromEnd, -3}.Car.	Annotation	Bank2, IndexFromEnd, -3
Sheets.LdvSheet0.LdvFrame4.Map.Shaft*{Bank1, IndexFromEnd, -2}.Car.	Annotation	Bank1, IndexFromEnd, -2



Possible combination examples

Project References

Data Tree & Project References

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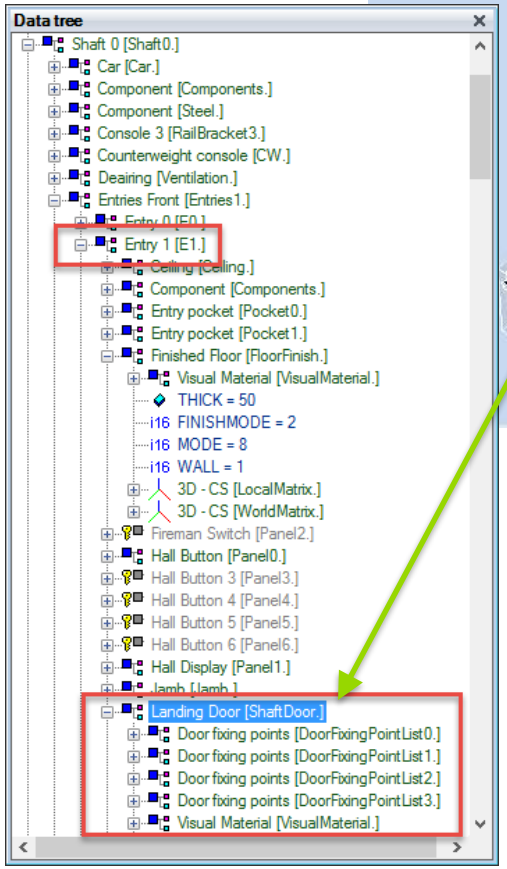
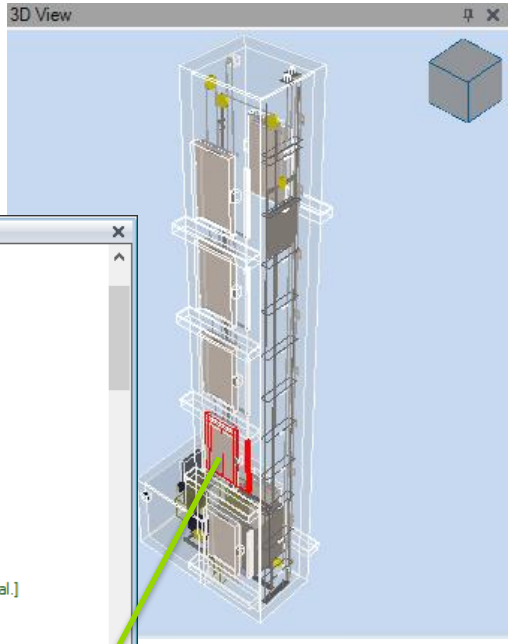
Project References

- Refer to project specific values and objects
- Are created via the Liftdesigner Data tree
- The Data tree represents the project as a text structure
- There is one node for
  - Every component / object
  - Every dimension
- List objects have an individual node each, like
  - Entrances and landing doors
  - Rail brackets
  - Etc.



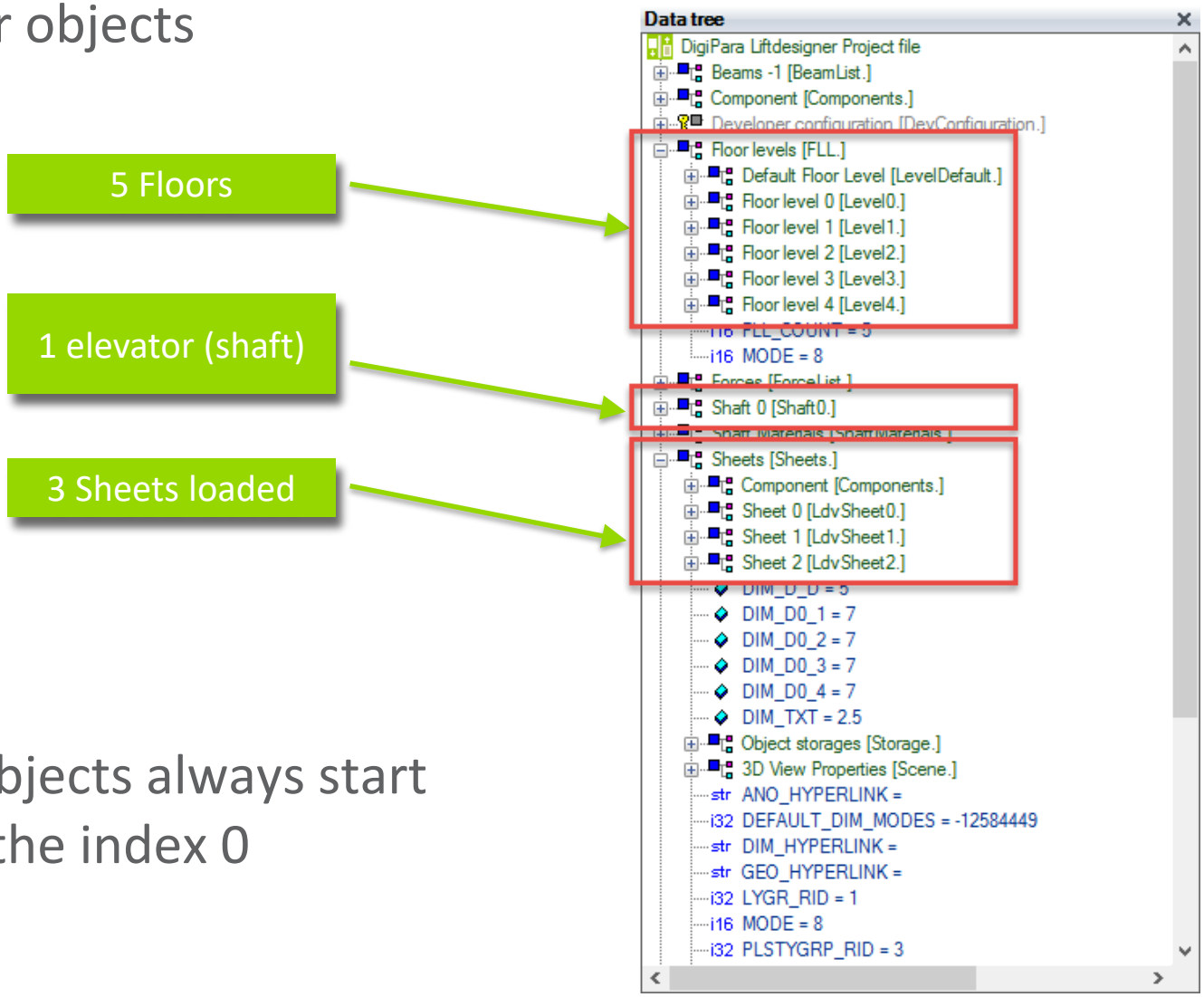


Example:

Landing door of Entry1 (= 2nd floor)

Project References - Data tree

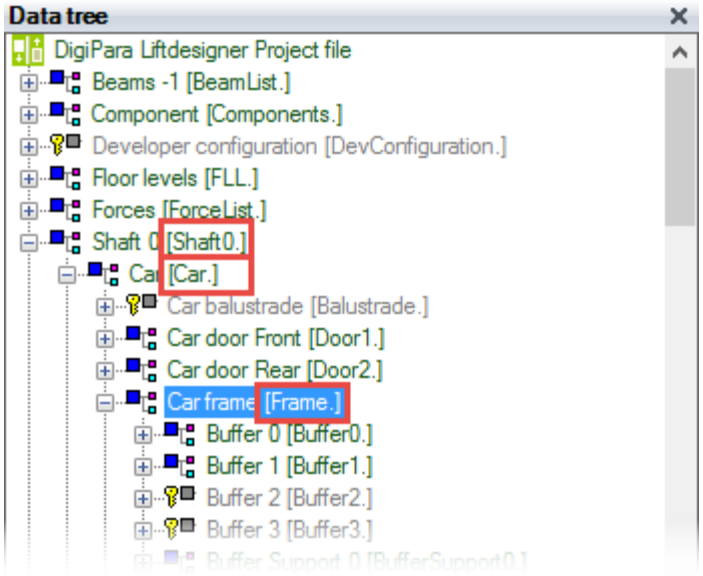
- Major objects



- List objects always start with the index 0

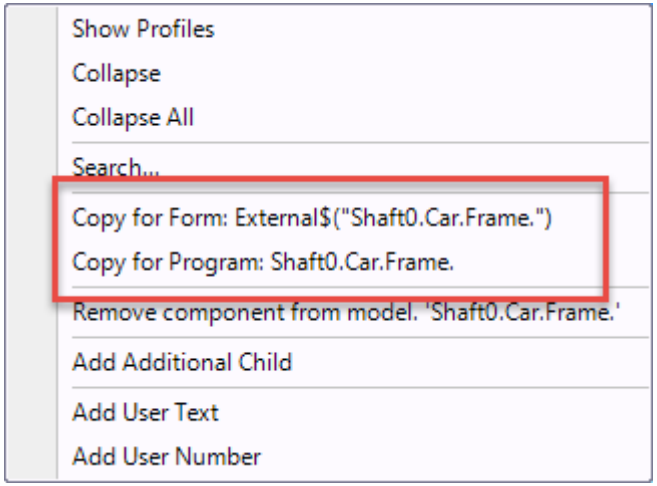
Project References

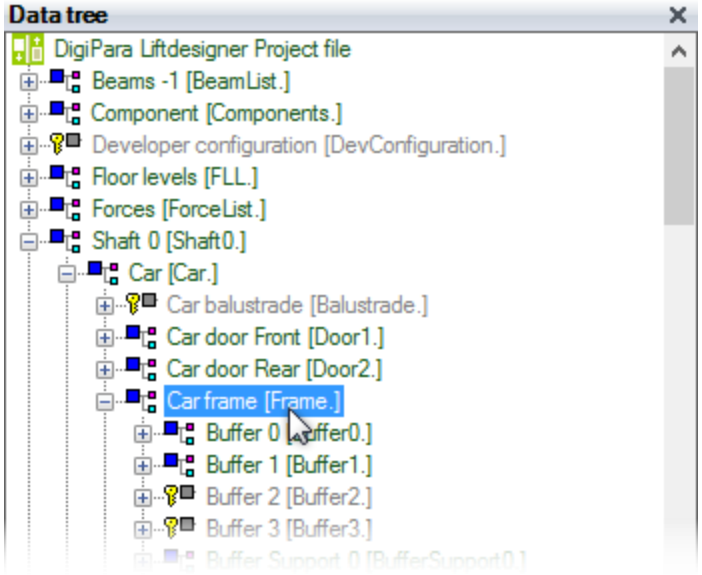
- Project References are build on the names of the selected object and its parents
  - Reference for the car frame object:
  - "**Shaft0.Car.Frame.**"
- Object related references are typically ending on a dot



Project References

- References can be created via the right mouse button context menu



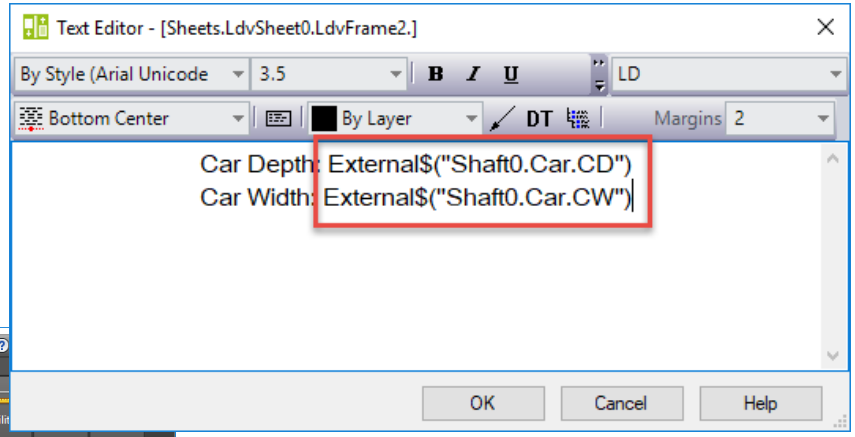


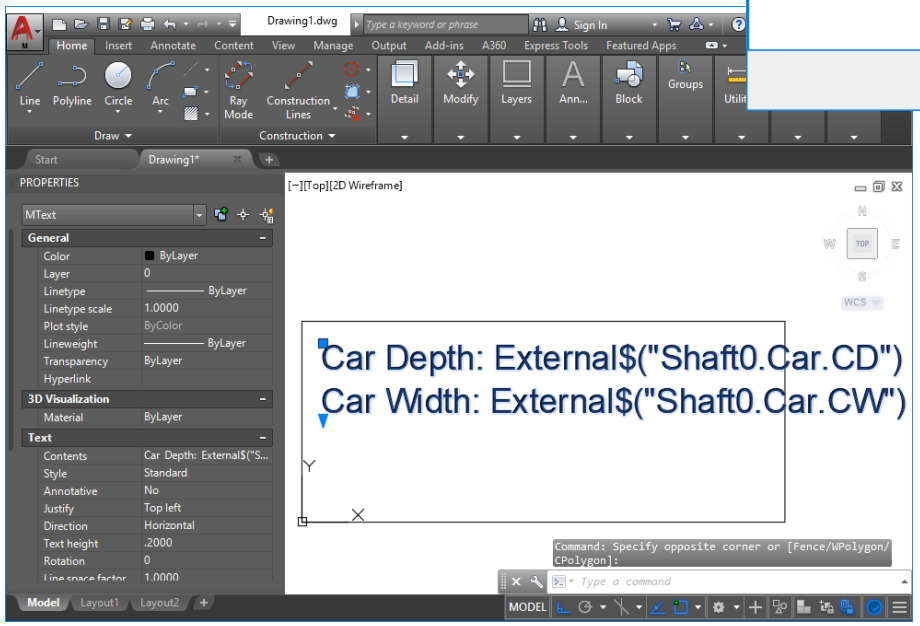
Project References

- Project references can be used
  - in Annotations
  - in DWG files
  - in Excel files
  - in .NET / VBA programs

Copy for Form

Copy for Program

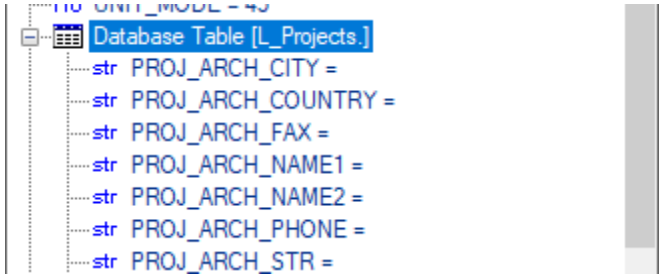




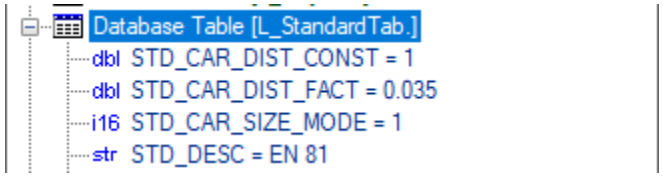
Project References

- Typically referenced project values are located under the following nodes

- The **L_Projects**. node



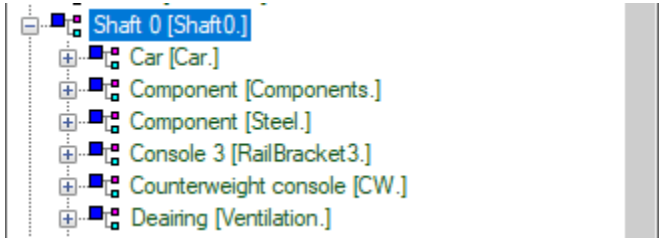
- The **L_StandardTab**. node



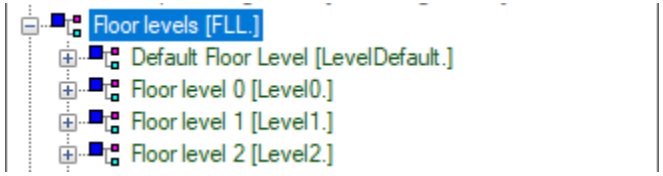
Project References

- Typically referenced project values are located under the following nodes

- The **Shaft**. node

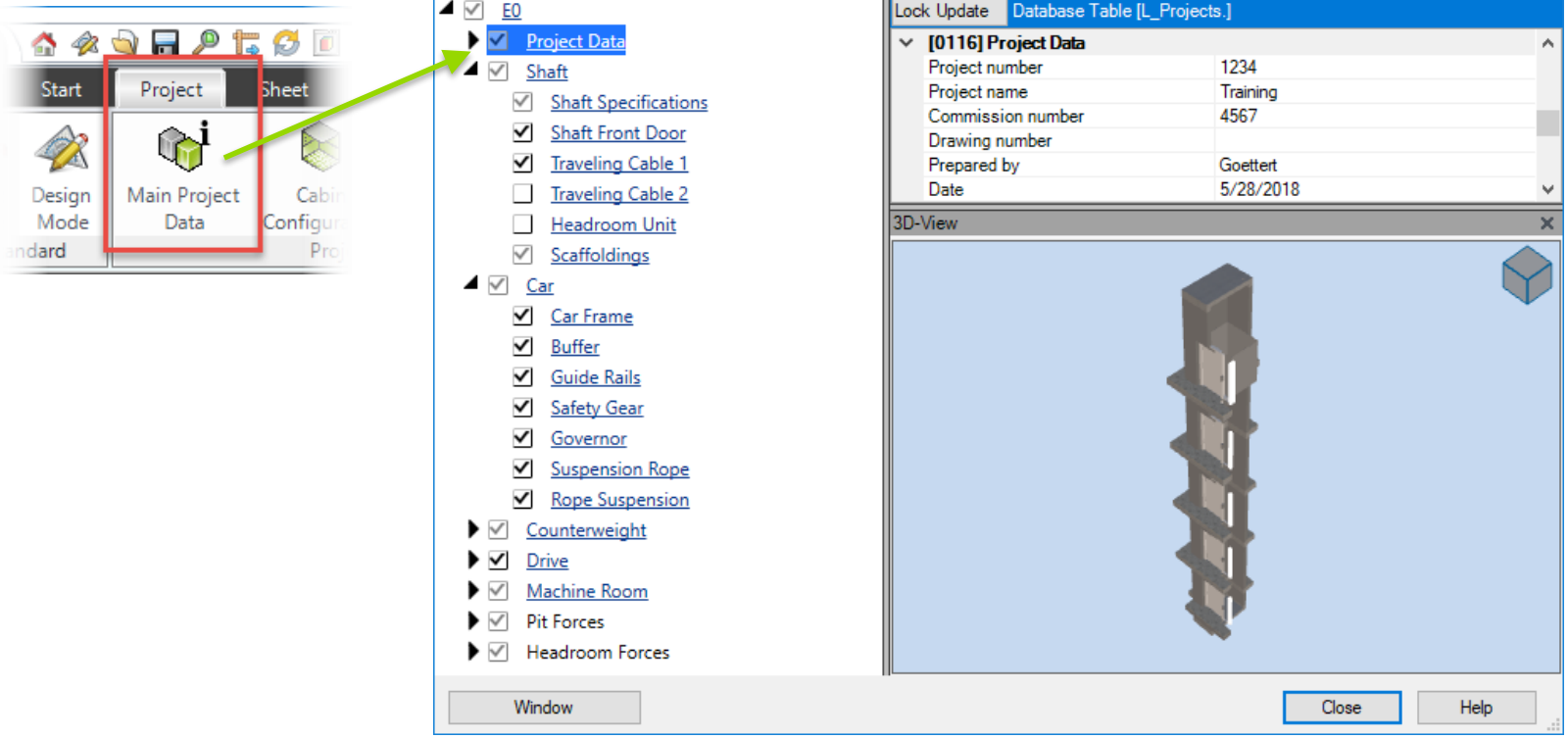


- The **FLL**. node



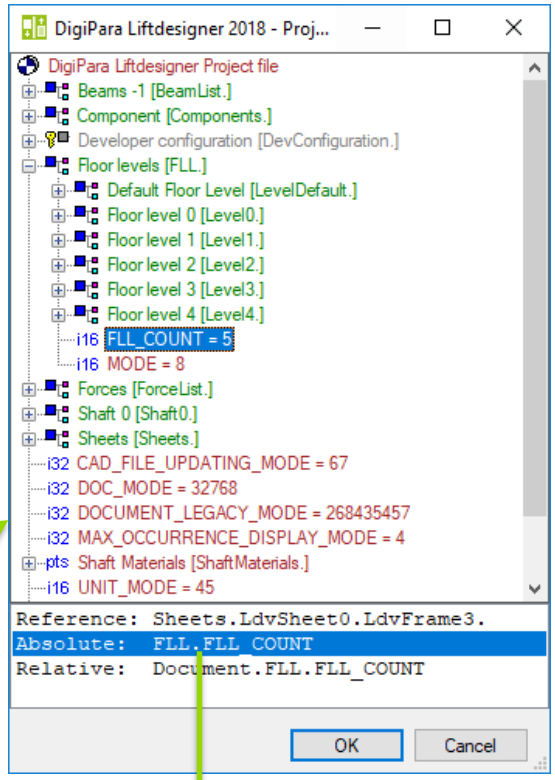
Project References

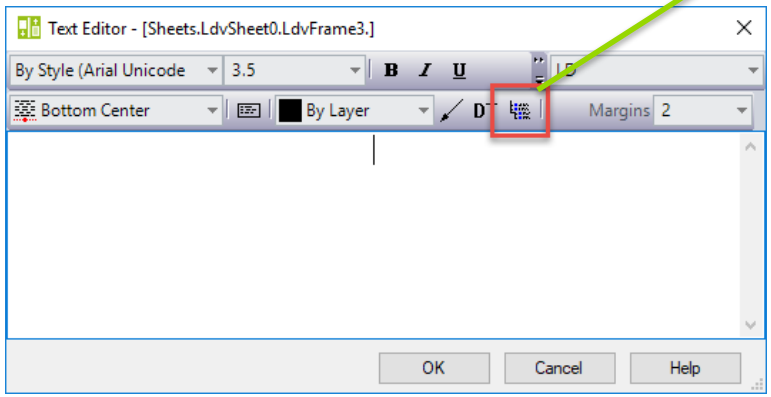
- The Project specification values located under the **L_Projects**. node (basically used in title blocks) can be edited via the Main Project Data … dialog

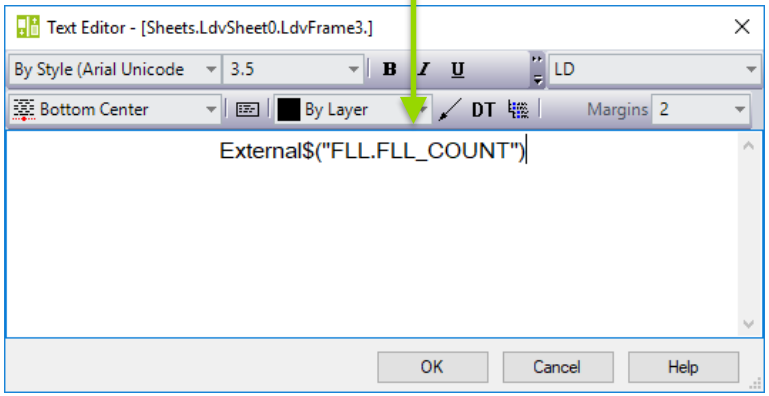


Project References

- Using data tree references in annotations
  - Via the Text Editor Project tree (similar to the **Data tree**)
  - Add the Project tree reference via a double click on the tree item or via the OK button

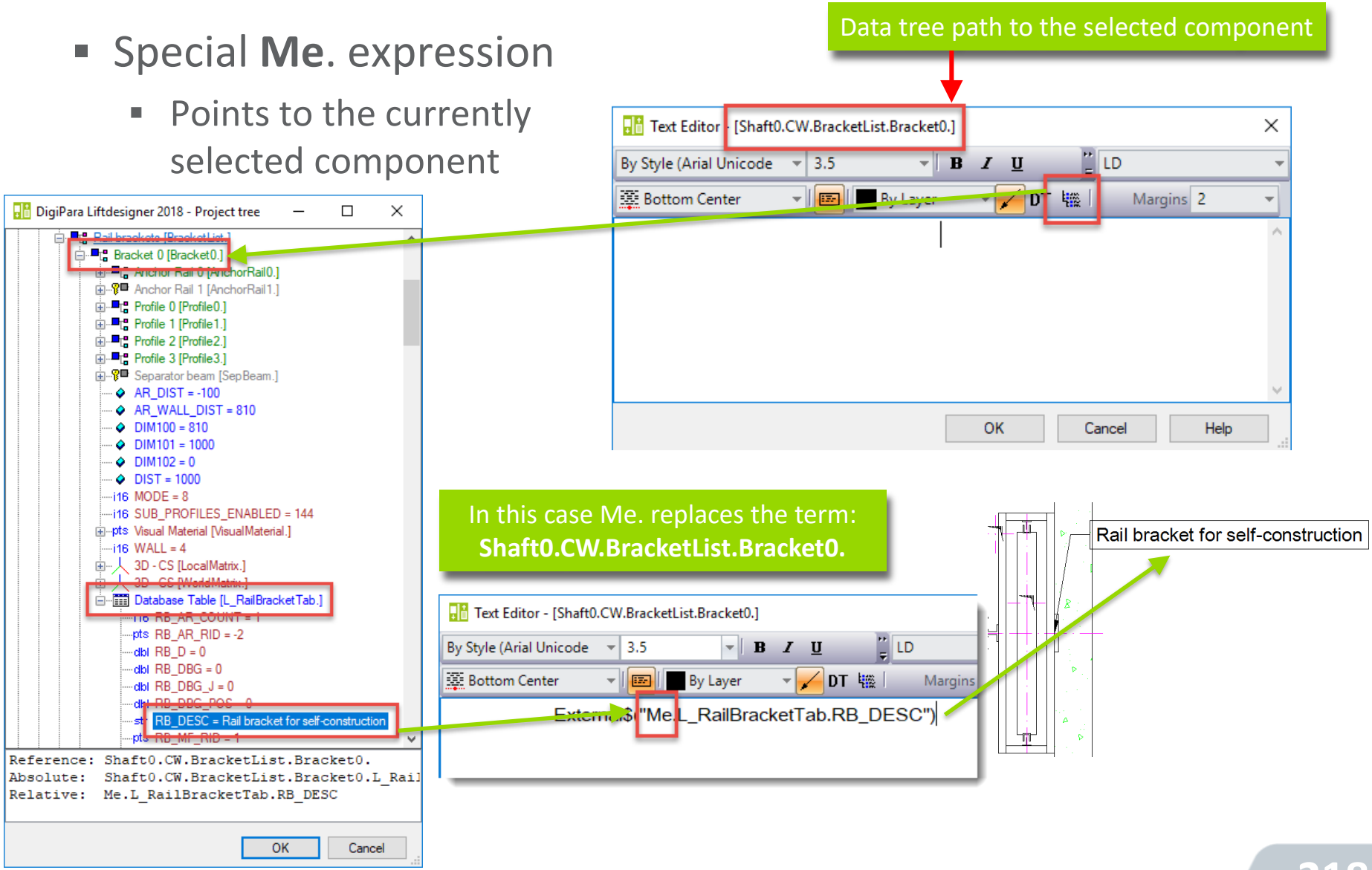






Project References

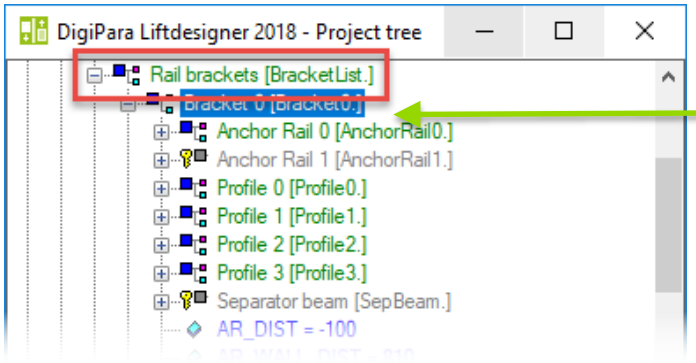
- Special **Me.** expression
  - Points to the currently selected component

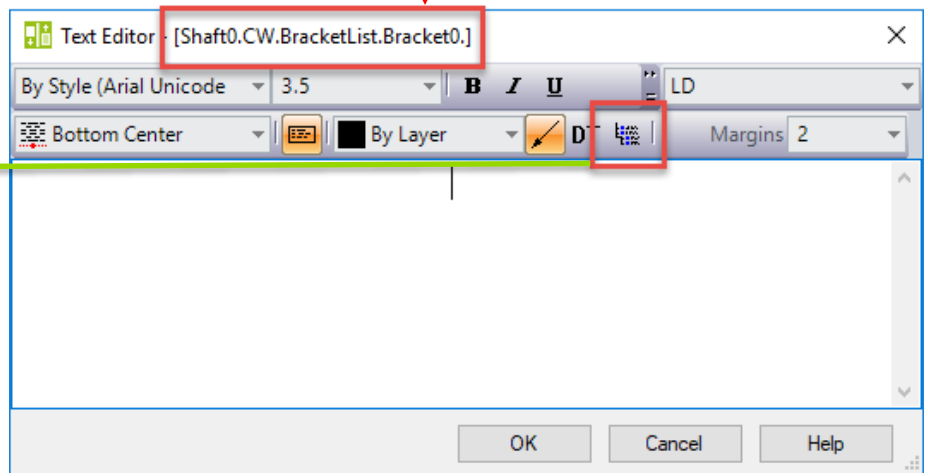


Project References

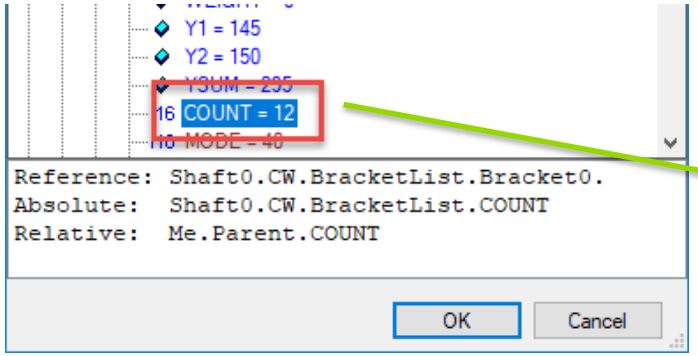
- Special **Me.Parent.** expression
  - Points to the parent object node of the selected component

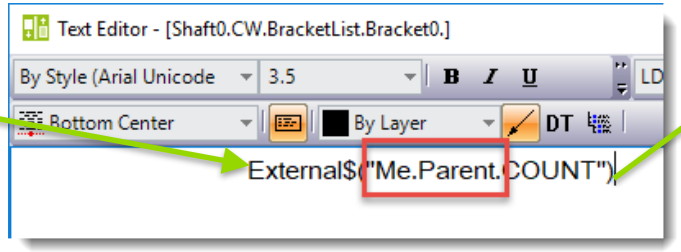
Data tree path to the selected component

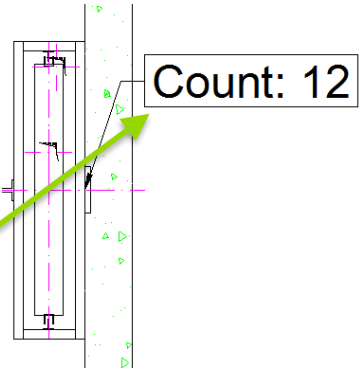




Selecting the COUNT value of the parent node item

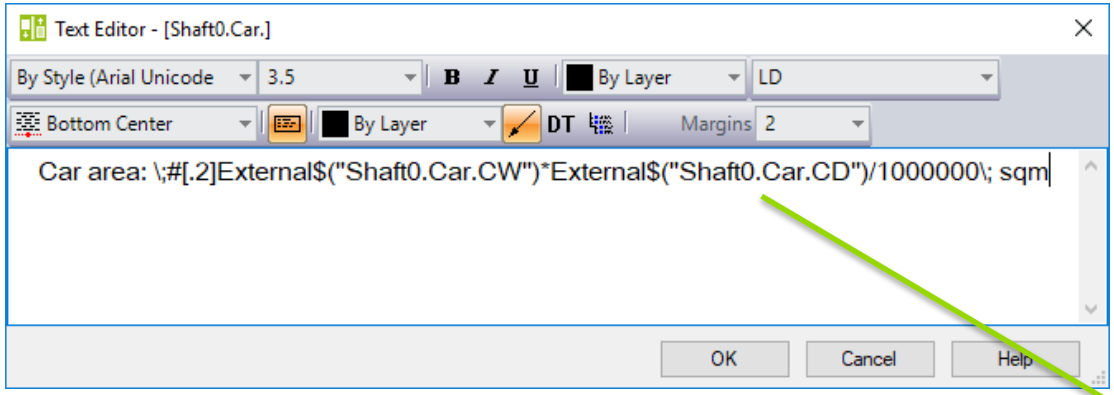


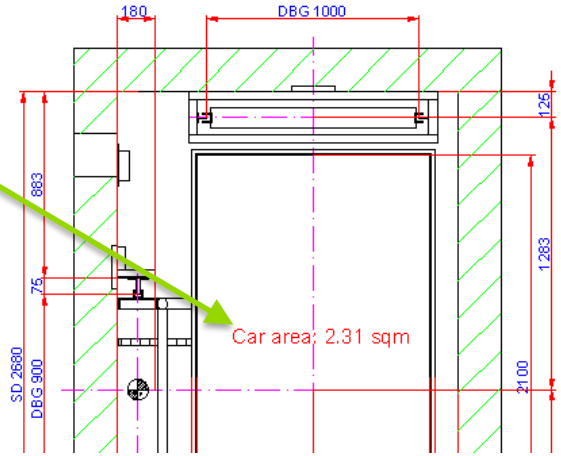




- Simple calculations using Data tree references

Car area: \;#[.2]External$("Shaft0.Car.CW")*External$("Shaft0.Car.CD")/1000000\; sqm





Calculations can be combined with leading or trailing text. Therefore the corresponding parts of the annotation must be separated by a backslash-semicolon character sequence (\;). Calculations generally start with a # symbol.

Practice - Project References

- Create a new Plan view and add a view frame annotation containing the following references:
  - Shaft depth
  - Shaft width
  - Floor count
- Create a shaft lamp component annotation containing the following references:
  - Lamp count
  - Lamp type

External Blocks
(AutoCAD DWG‘s)

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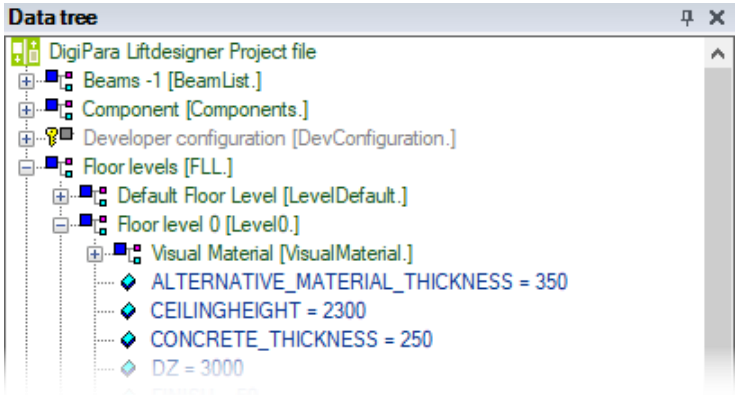
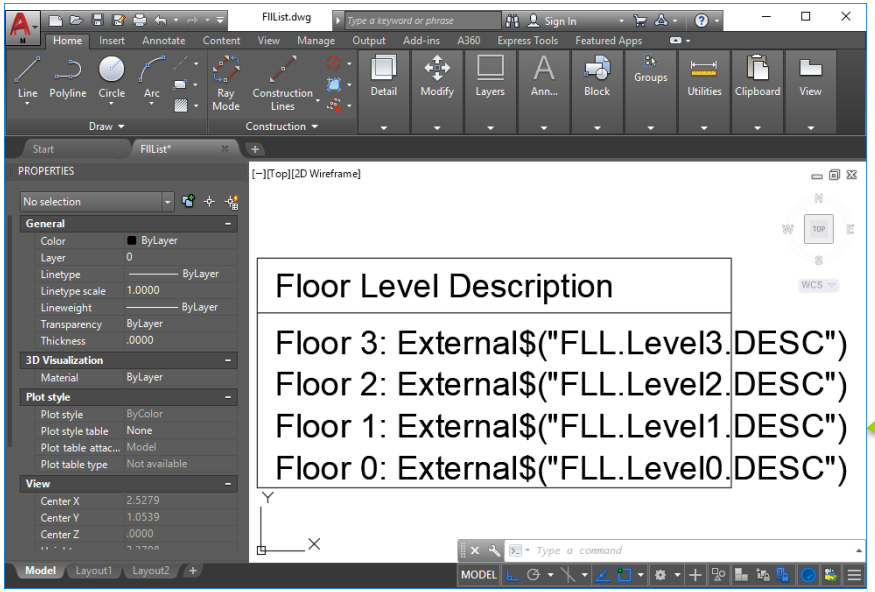
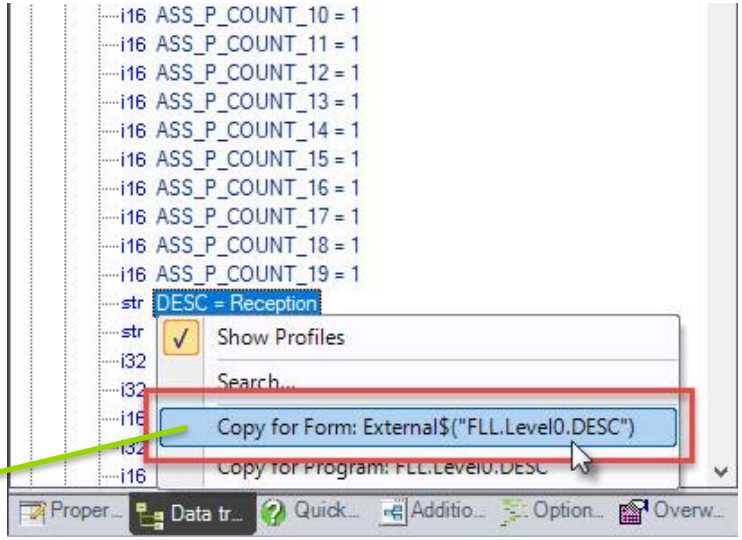
External Blocks

- Can be displayed as static content in DigiPara Liftdesigner drawings (.dwg, .dxf)
- Can contain DigiPara Liftdesigner project references
- Can be used in DWG annotations and standard view frames

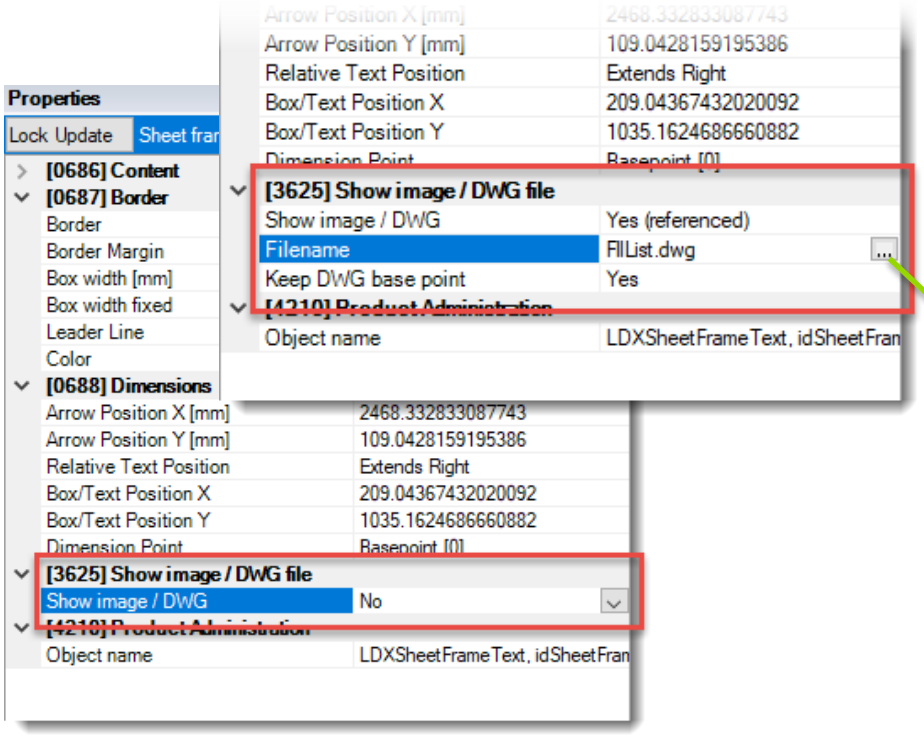


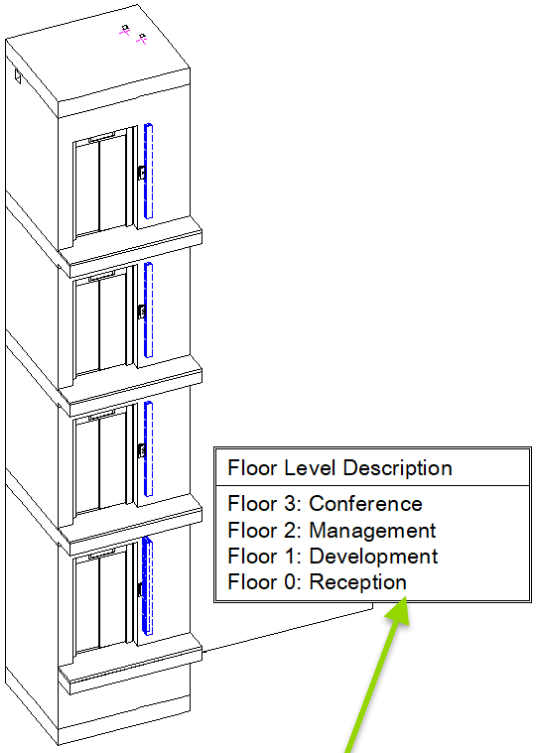


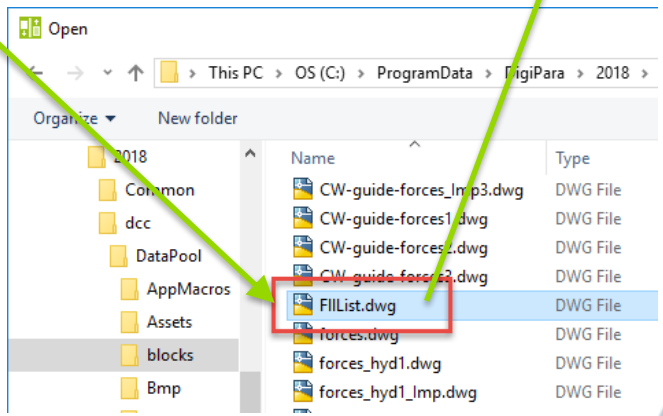


External Blocks

- DWG Annotations
  - Are created via the corresponding annotation property
  - Replace an existing component/ view frame annotation with a dwg block

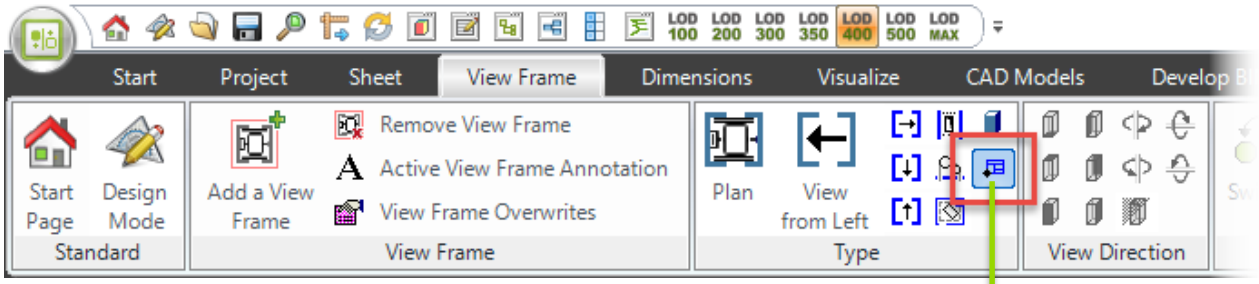


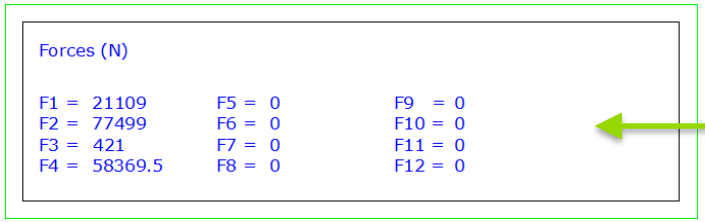


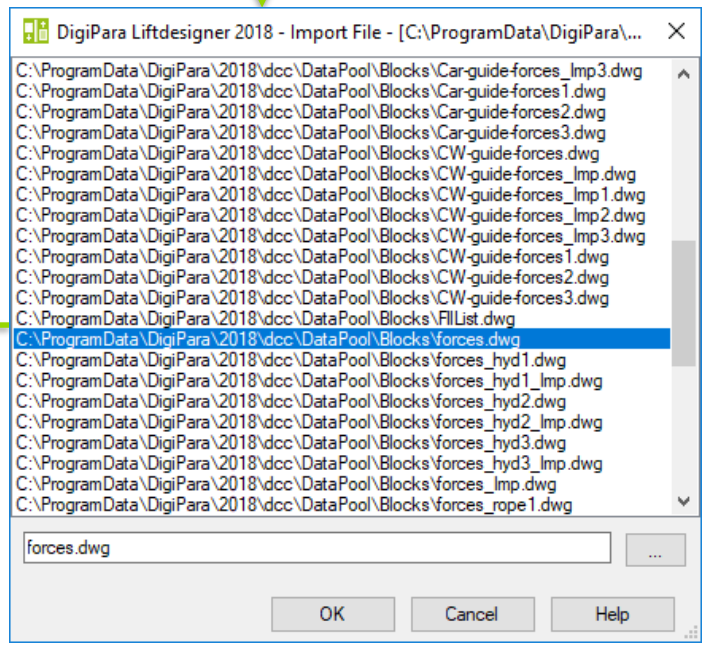


External Blocks

- Independent DWG annotations
  - Replace an existing view frame

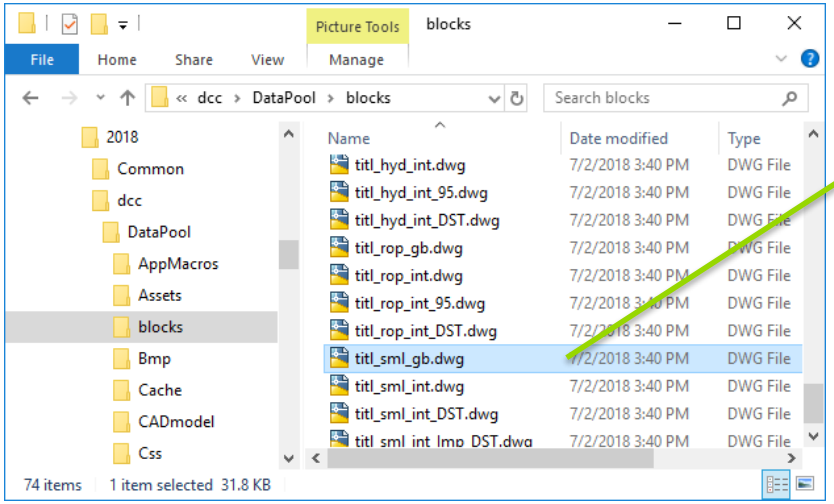


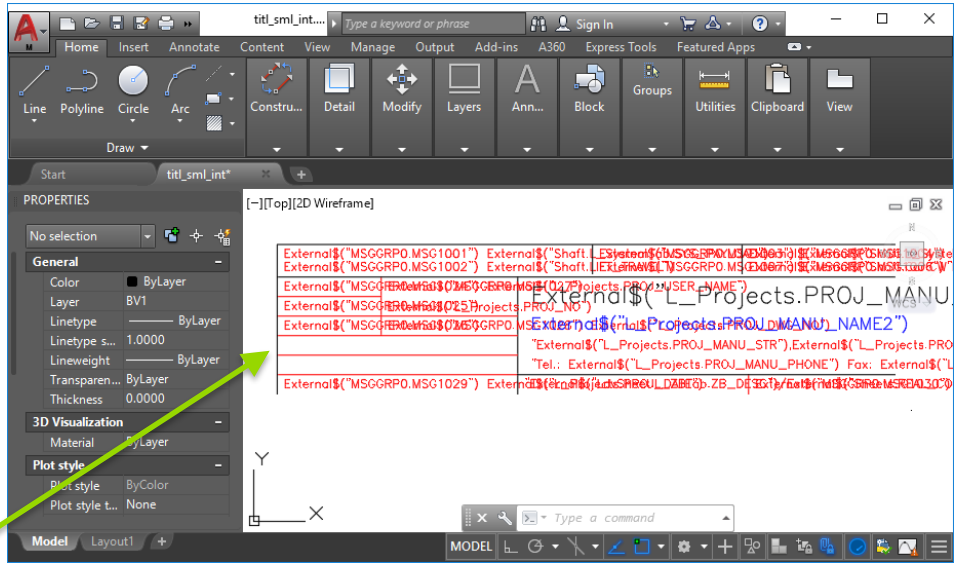


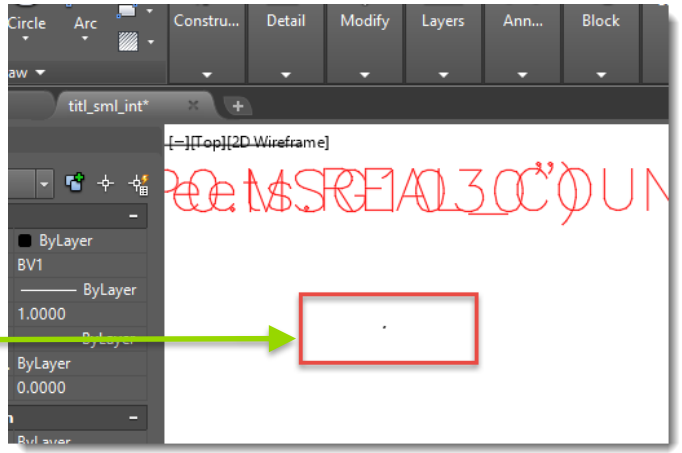


External Blocks

- Title Blocks
  - Start with the titl_ prefix



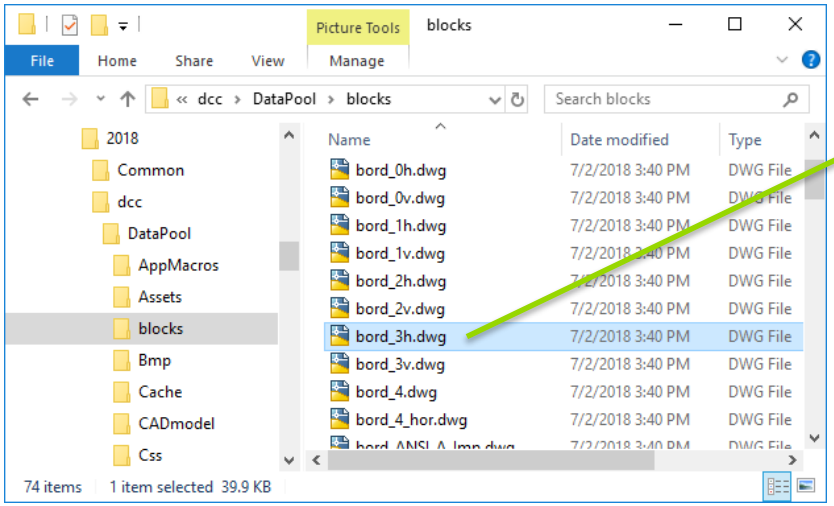


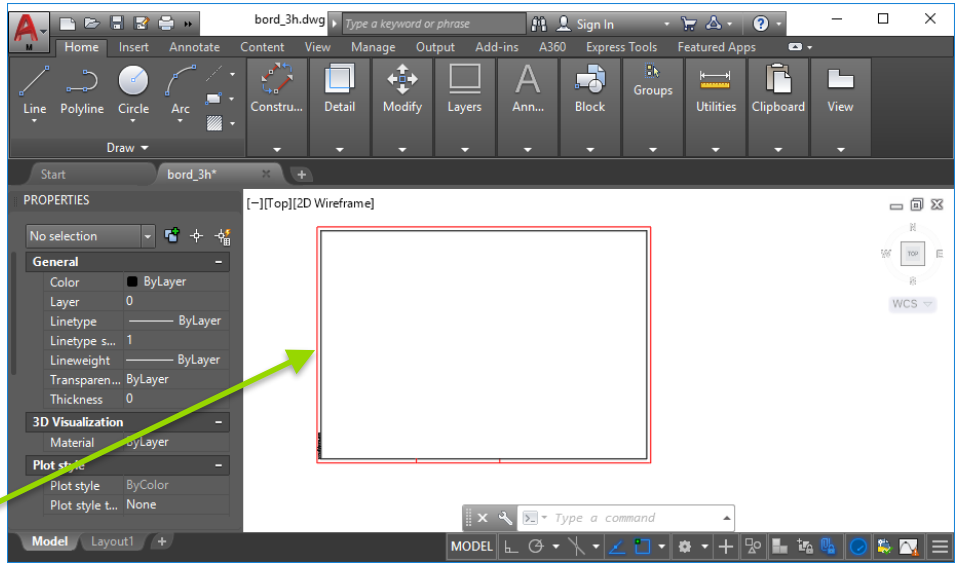


The object in the lower left corner specifies the title block's insertion point. It automatically gets aligned with the lower left corner of the drawing border in DigiPara Liftdesigner.

External Blocks

- Drawing borders
  - Start with the bord_ prefix





External Blocks

- The default directory for external blocks (.dwg, .dxf files) is the data pool's blocks directory

- e.g. C:\DigiPara\Datapool\blocks

Export Project Values

(*.rtf, *.xls, *.html)

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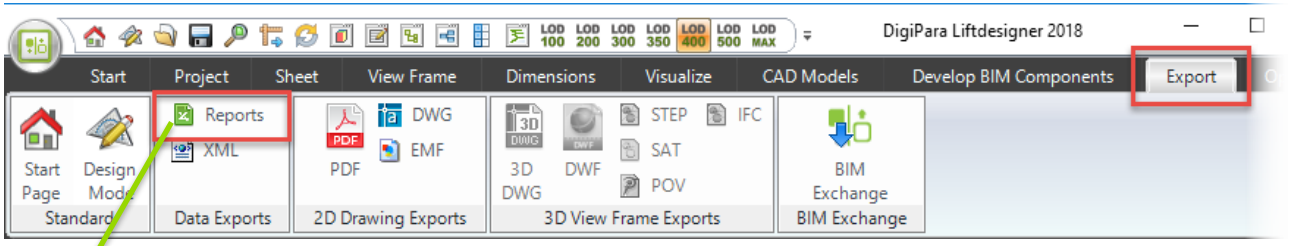
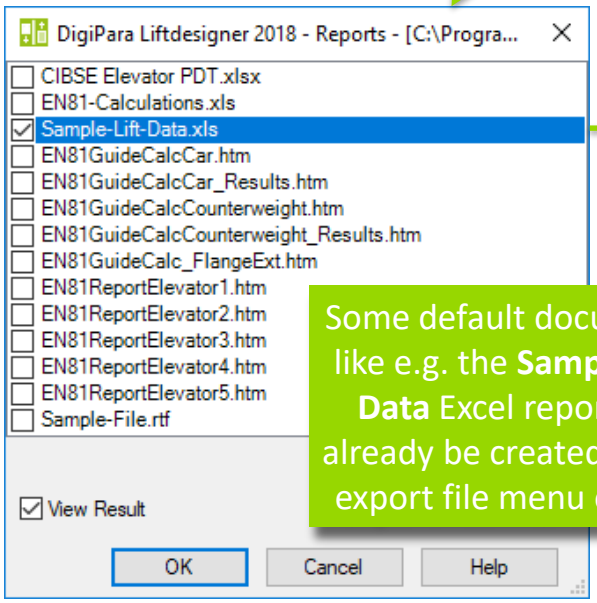
Export project values

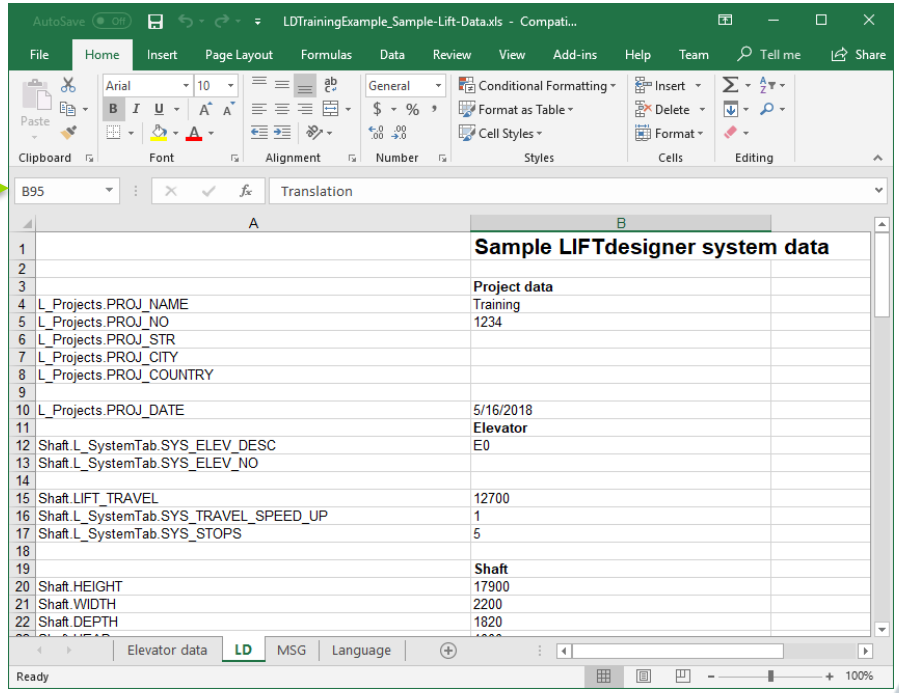
- DigiPara Liftdesigner allows you to export project values like forces, dimensions or strings to other file formats like ***.rtf**, ***.xls** and ***.html**.

The Reports button remains inactive for unsaved projects.



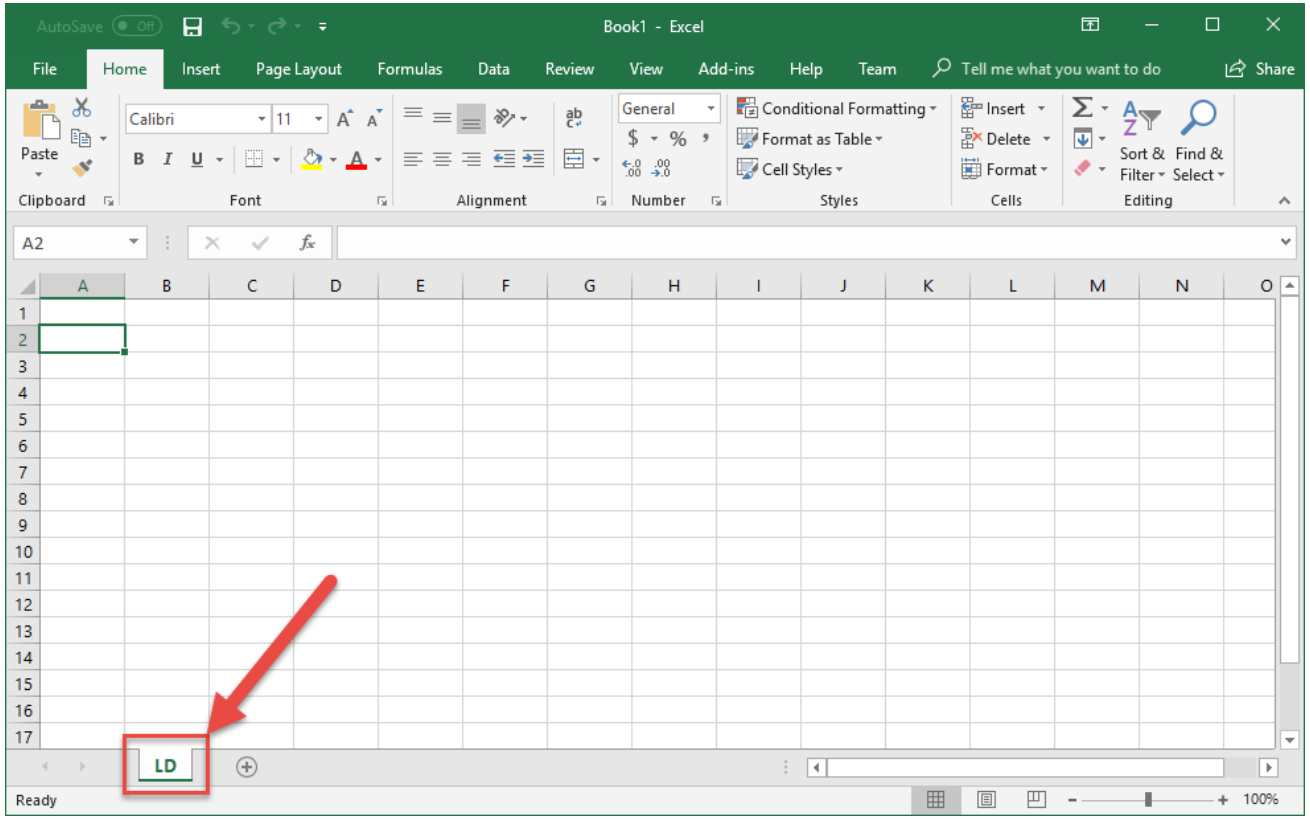


Some default documents, like e.g. the **Sample-Lift-Data** Excel report can already be created via the export file menu option.



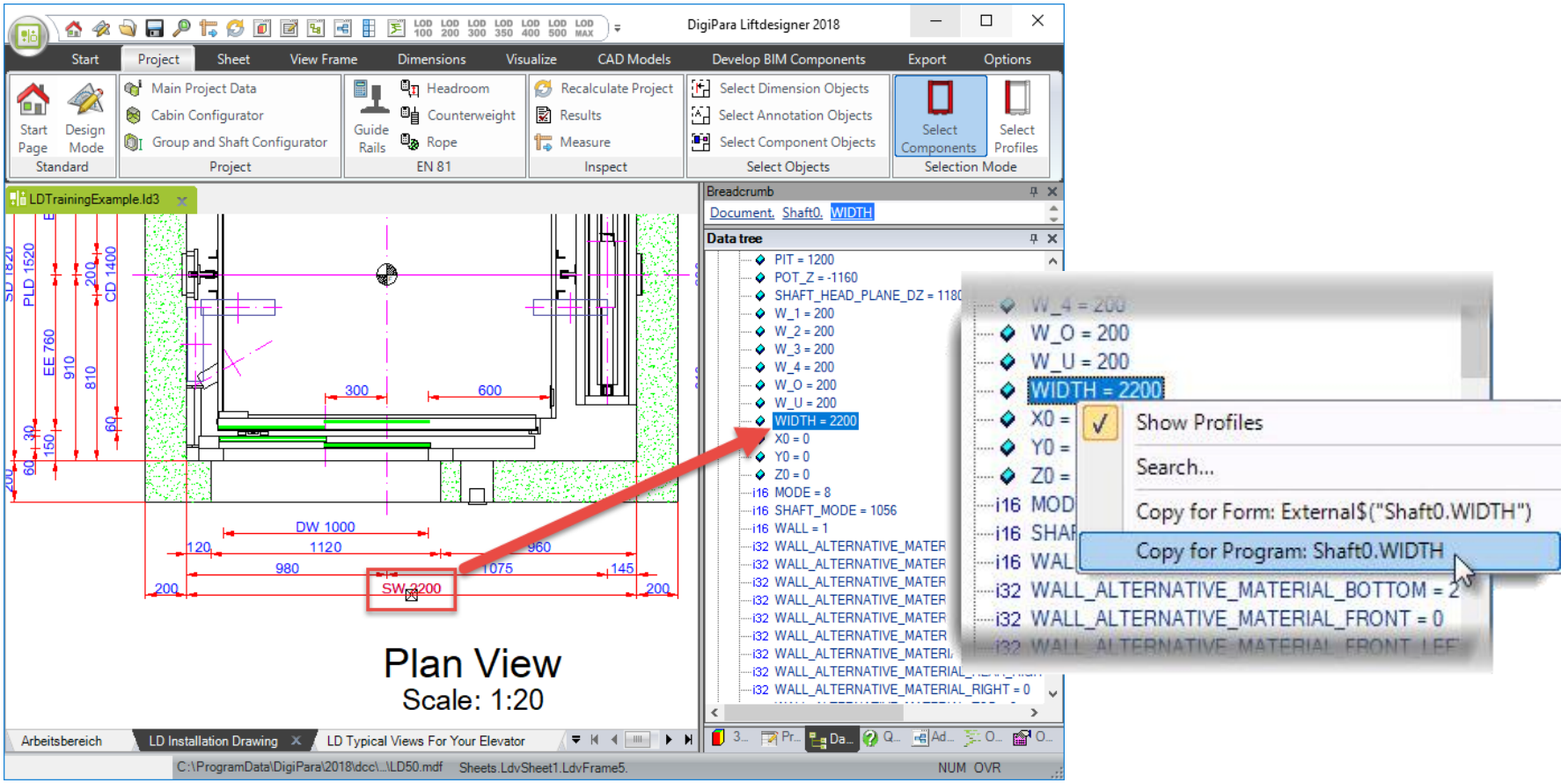
Export project values (*.xls)

- Exporting project values to an Excel file:
  - First of all create a new or open an existing Excel file. Afterwards add a new worksheet to this file and give it the name **LD**. This file will become a new template file for an Excel elevator report generated via DigiPara Liftdesigner.



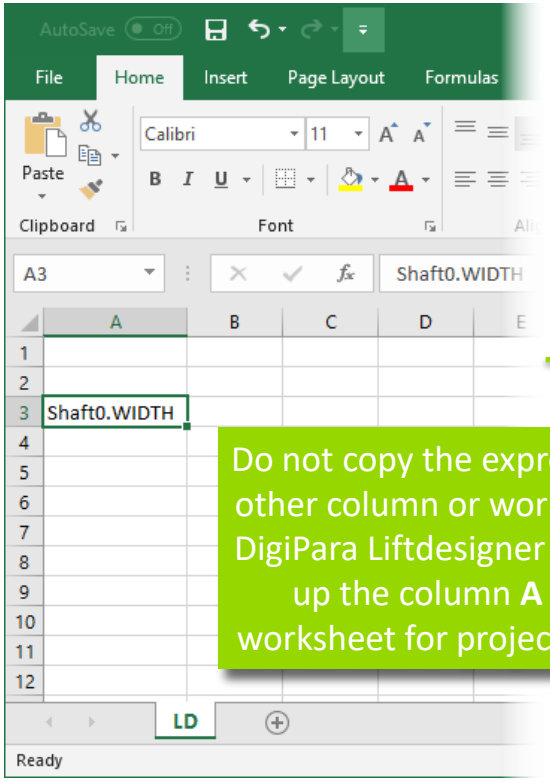
Export project values (*.xls)

- Select the project value in the DigiPara Liftdesigner Data Tree

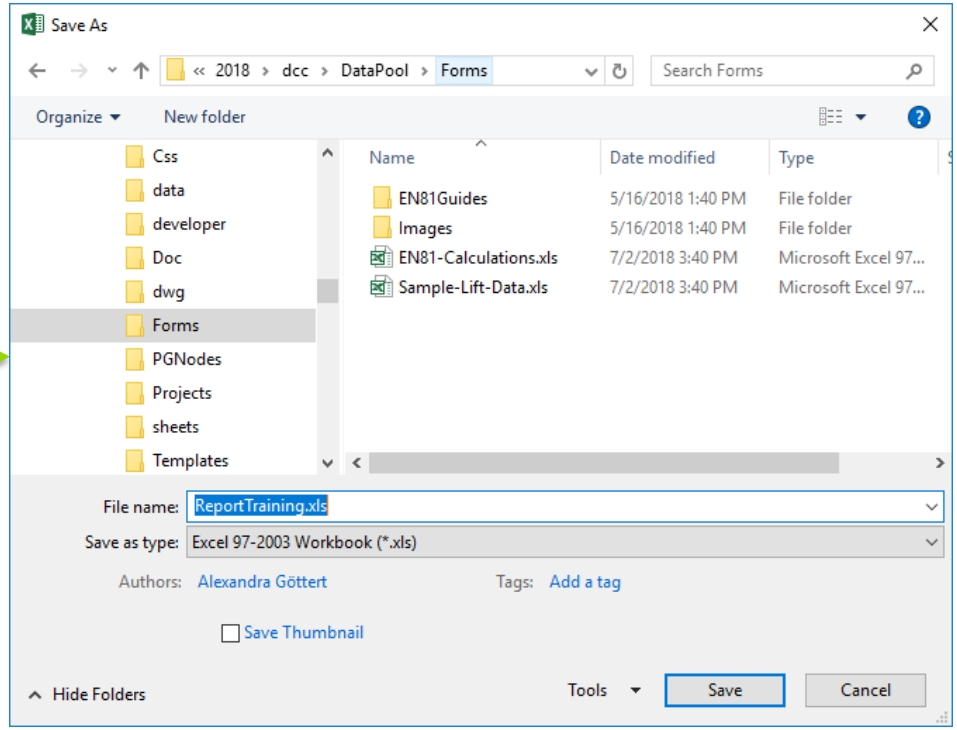


Export project values (*.xls)

- Paste the copied expression to any cell in column **A** in the **LD** worksheet.
- Save the Excel template file in DigiPara Liftdesigner Pool
  - C:\ProgramData\DigiPara\dcc\DataPool\Forms

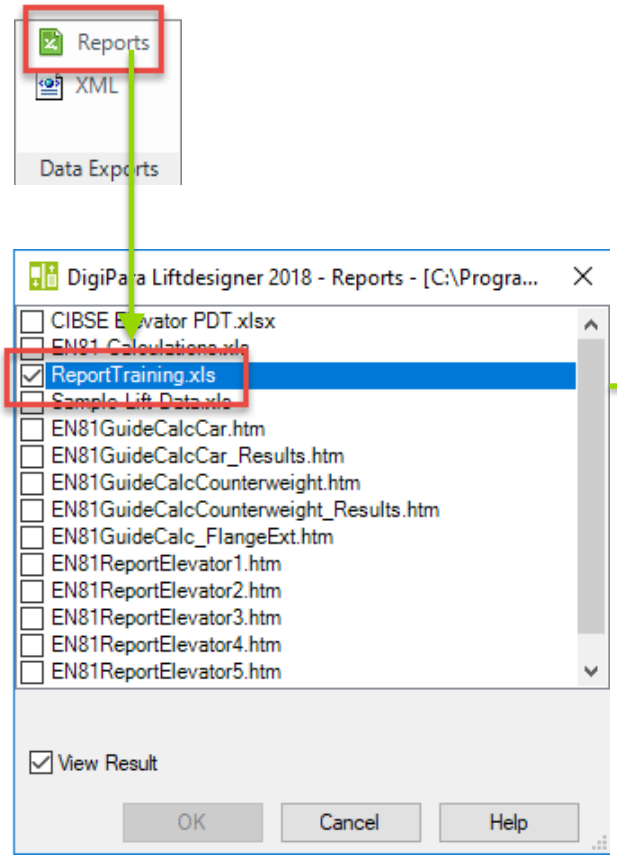


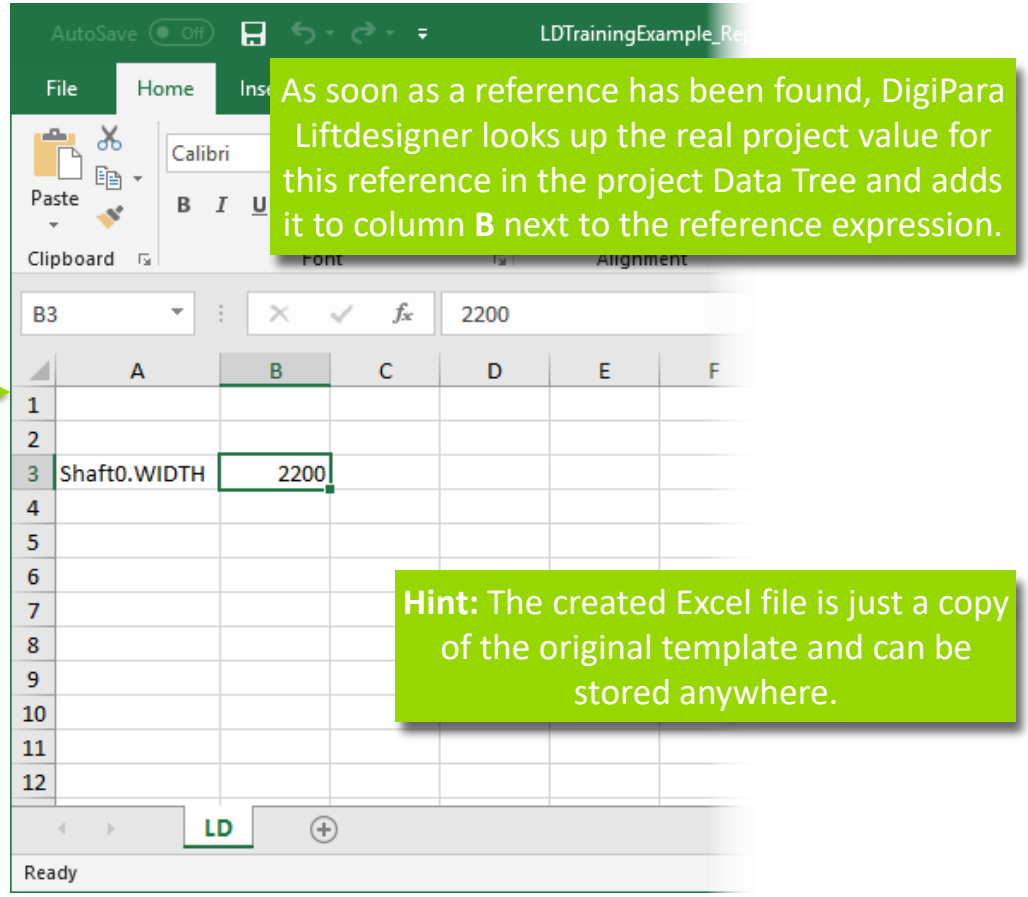
Do not copy the expression to any other column or worksheet, since DigiPara Liftdesigner will just look up the column **A** in the **LD** worksheet for project references.



Export project values (*.xls)

- Now you can see that DigiPara Liftdesigner automatically has added a new value to column **B** in the **LD** worksheet, next to the Column **A**, containing a value.





Material Configuration

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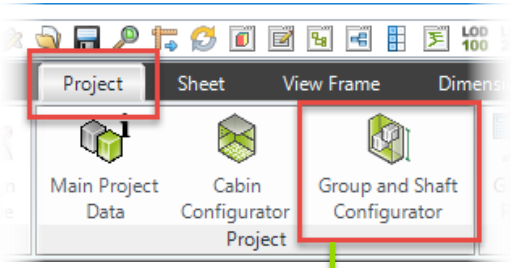
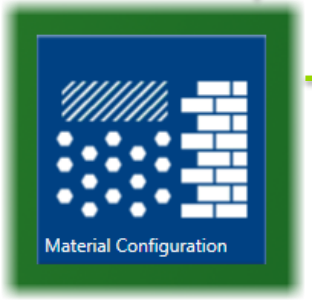
Material Configuration

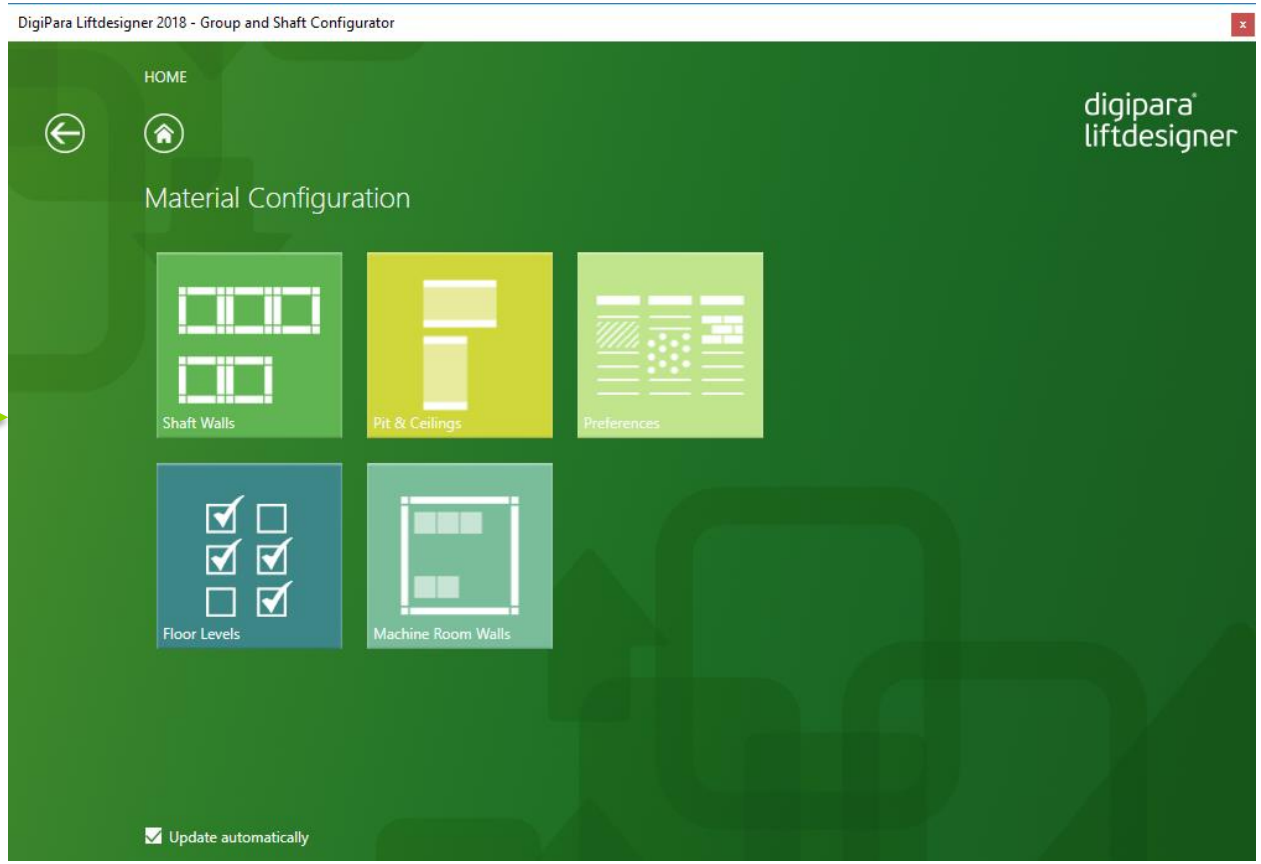
- Shaft Walls & Machine Room Walls
- Pit & Ceilings
- Floor Levels
- Preferences

Material Configuration

- Activation via the Group and Shaft Configurator







Material Configuration

Shaft Walls & Machine Room Walls

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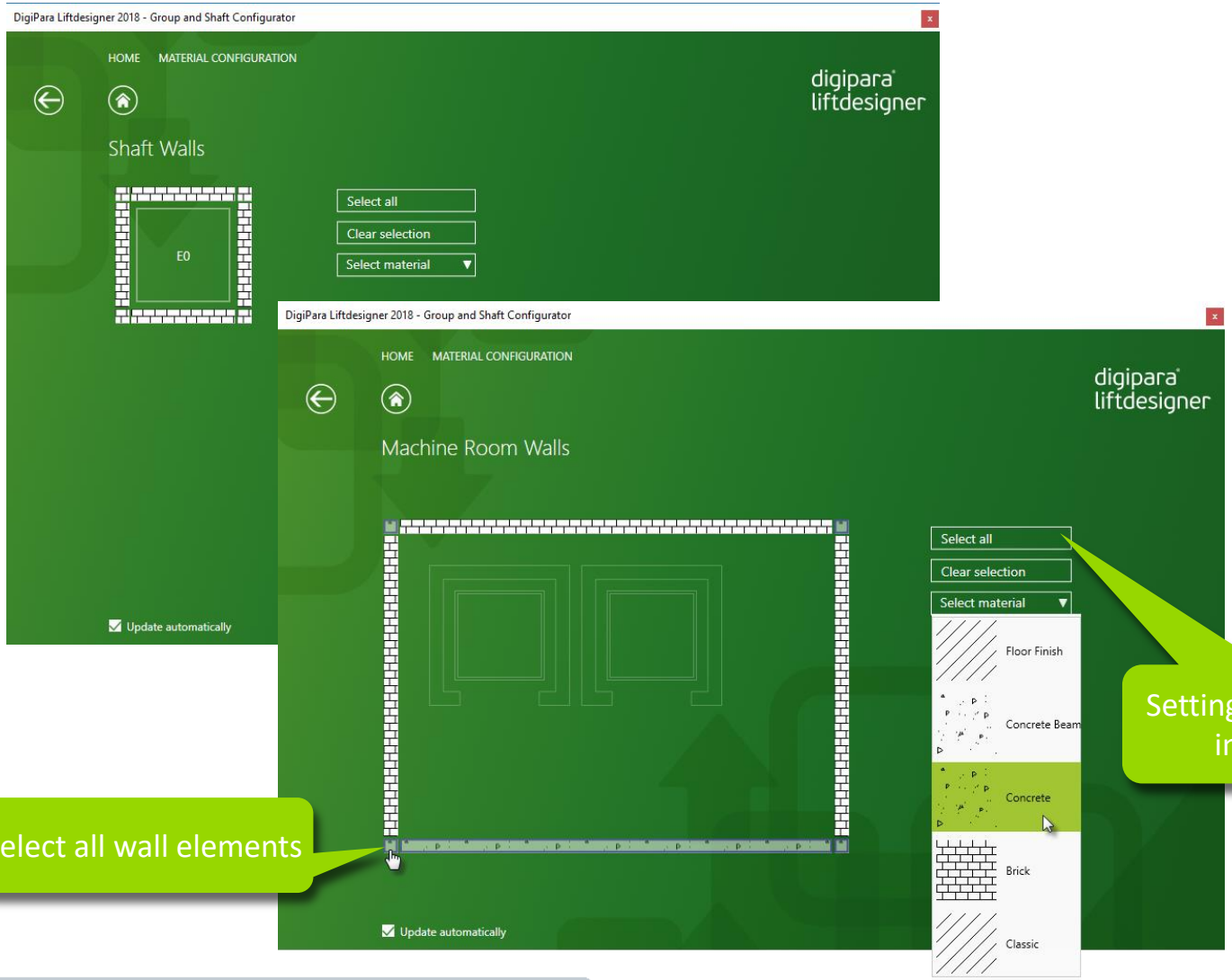
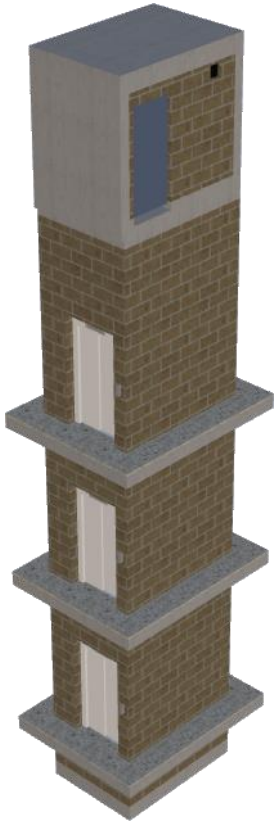
Material Configuration

- Shaft Walls & Machine Room Walls





Material Configuration

Pit & Ceilings

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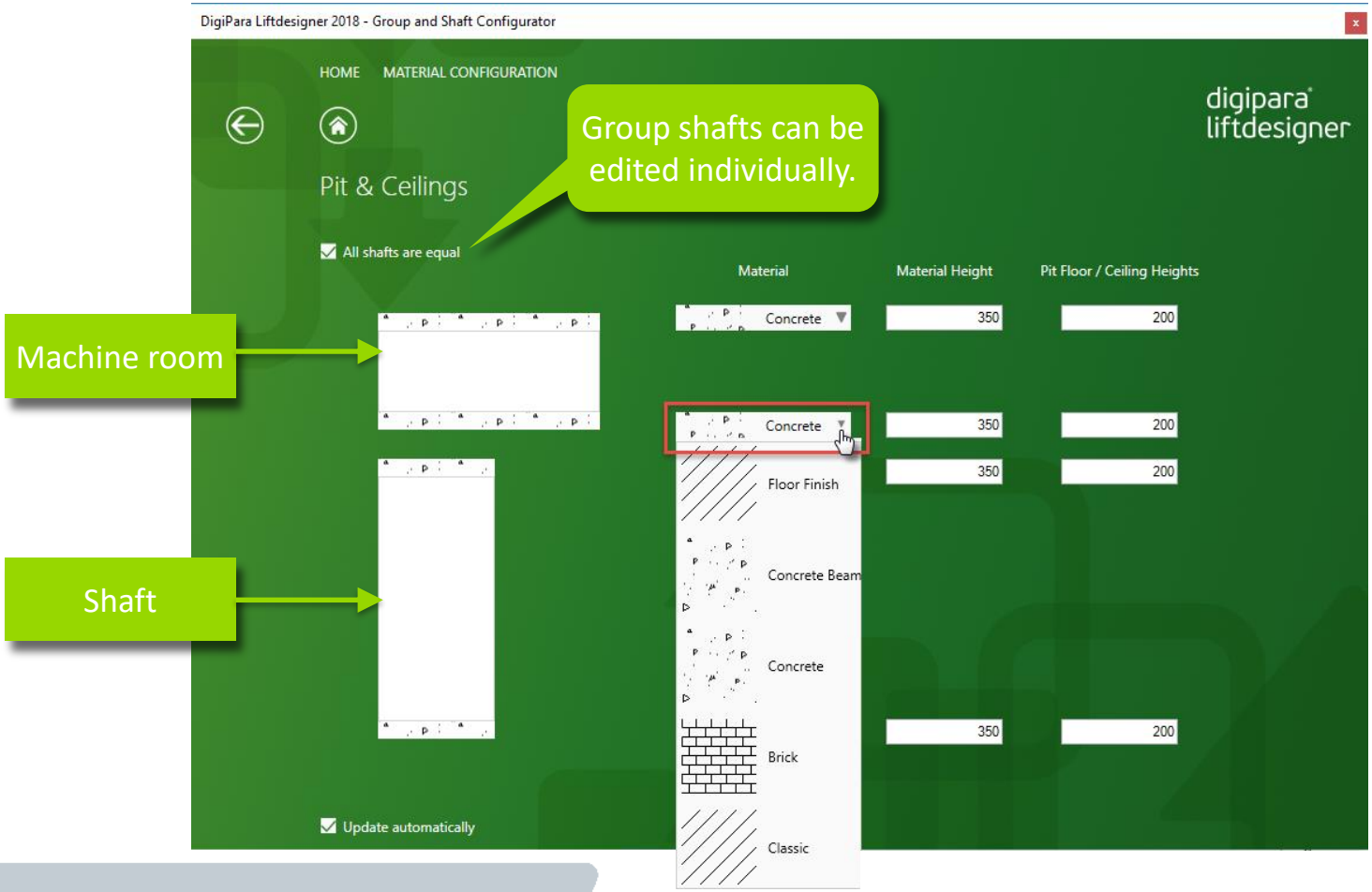
Material Configuration

- Pit & Ceilings
  - Setting different materials
  - Editing the Material Height and Pit Floor / Ceiling Heights



Material Configuration

Floor Levels

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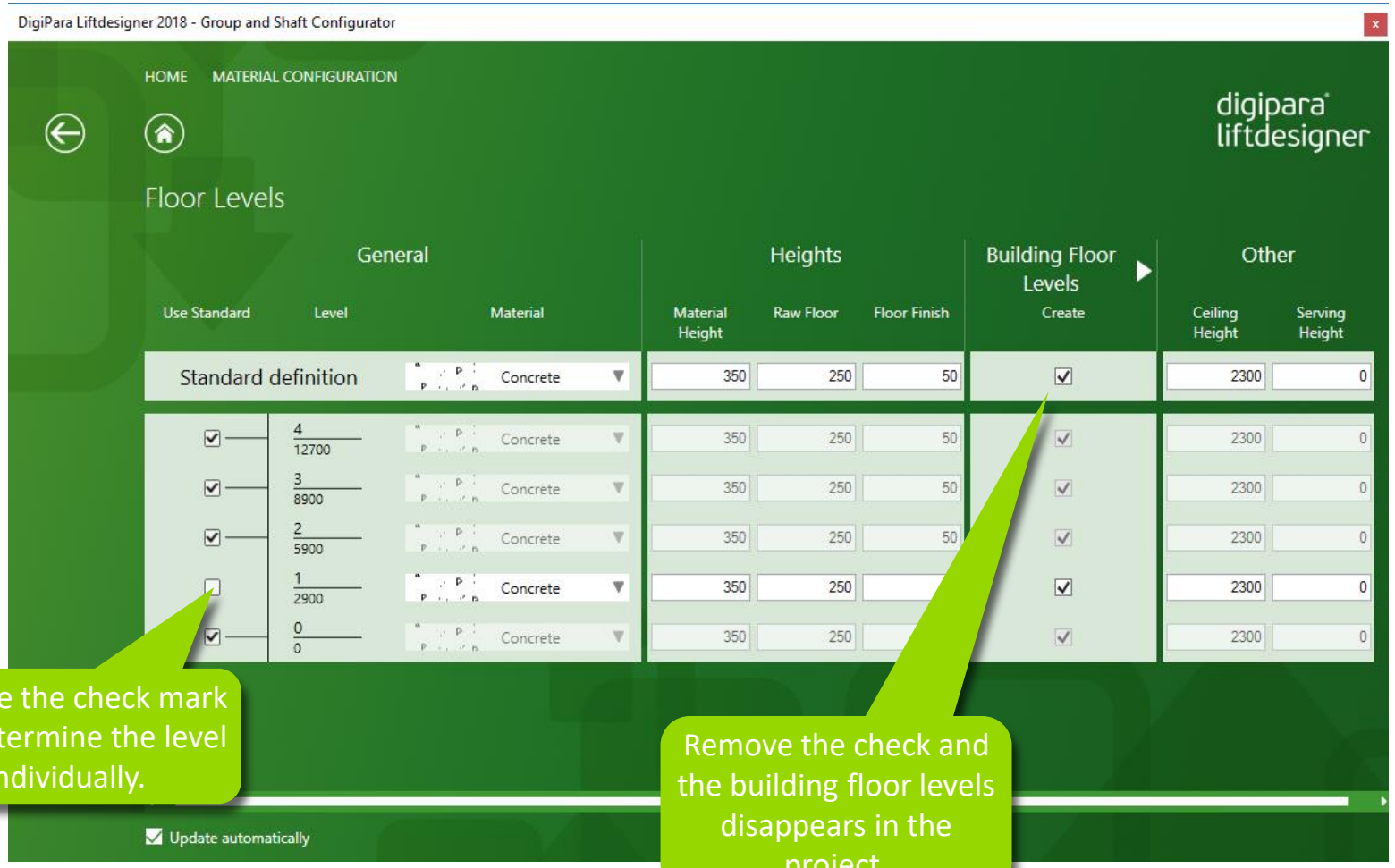
Material Configuration

- Floor Levels
  - Setting different materials and editing the heights



Material Configuration

Preferences / Material Hatching

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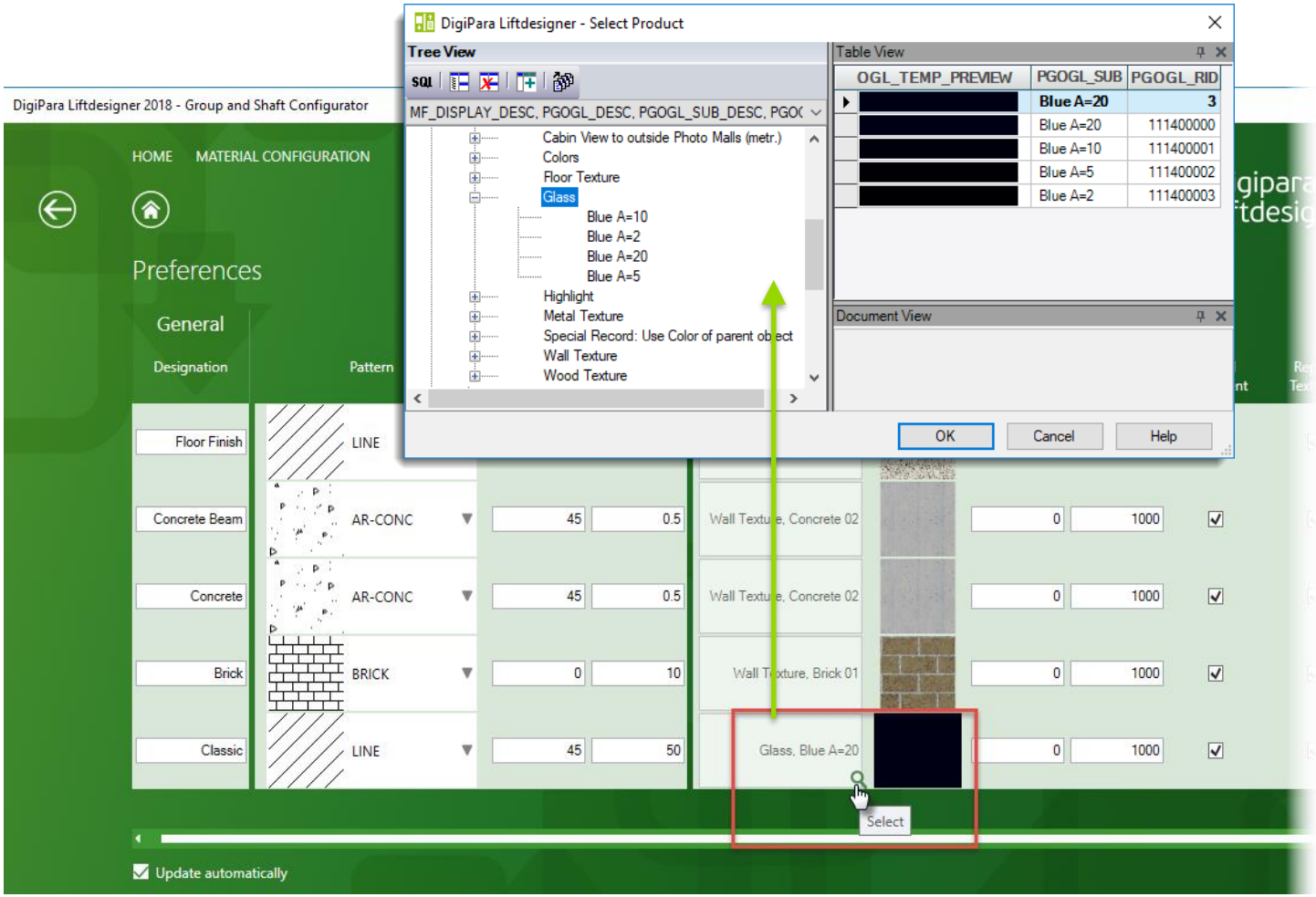
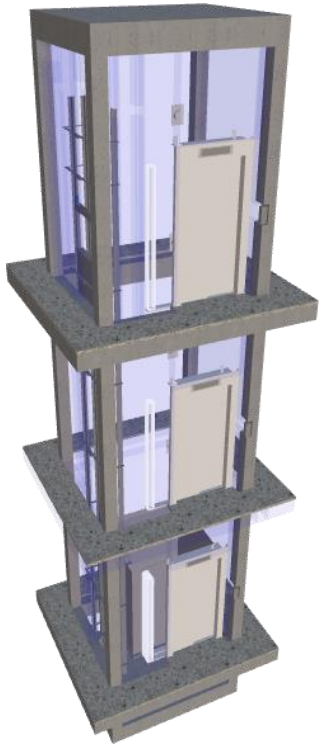
Material Configuration

- Preferences
  - Define your own Materials for your project





Material Configuration

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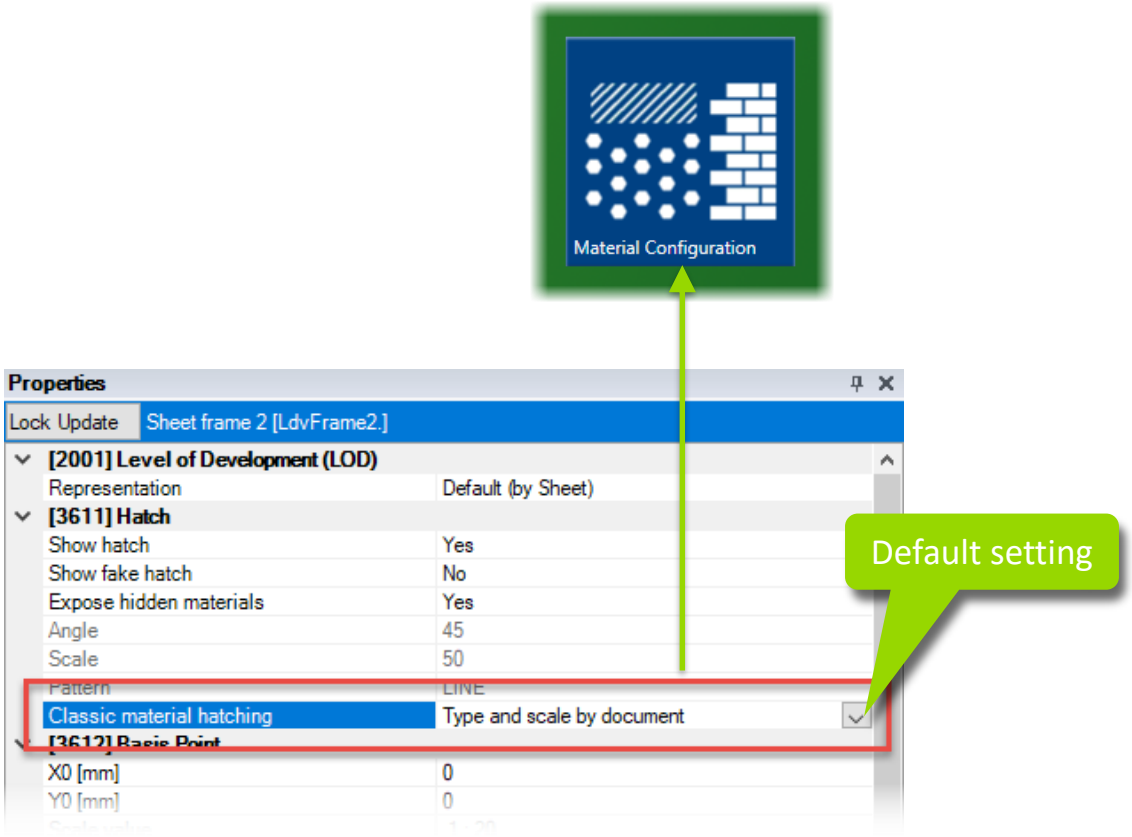
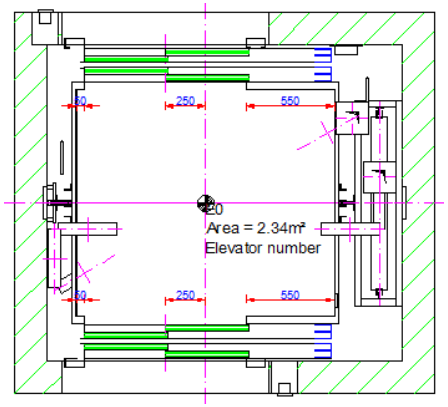
Classic material hatching: Type and scale by document

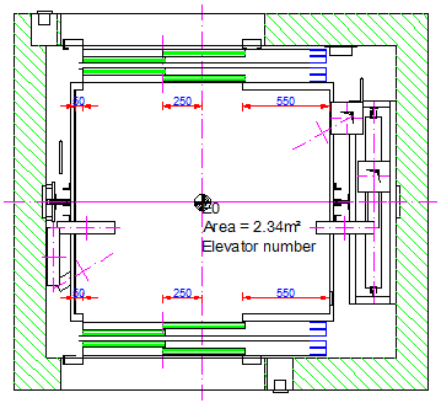


Material Configuration

Classic material hatching: Type and scale by sheet frame

To set up individual view frame hatches the shaft material has to be defined as **Classic**.





Set up individual view frame hatches for one material by using the properties window of the selected view frame. The elevator materials are not influenced.

Properties

Lock Update | Sheet frame 2 [LdvFrame2.]

[2001] Level of Development (LOD)	
Representation	Default (by Sheet)
[3611] Hatch	
Show hatch	Yes
Show fake hatch	No
Expose hidden materials	Yes
Angle	45
Scale	50
Pattern	LINE
Classic material hatching	Type and scale by document
[3612] Basis Point	
X0 [mm]	0

Properties

Lock Update | Sheet frame 2 [LdvFrame2.]

[2001] Level of Development (LOD)	
Representation	Default (by Sheet)
[3611] Hatch	
Show hatch	Yes
Show fake hatch	No
Expose hidden materials	Yes
Angle	-45
Scale	20
Pattern	LINE
Classic material hatching	Type and scale by sheet frame
[3612] Basis Point	
X0 [mm]	0

Additional Objects

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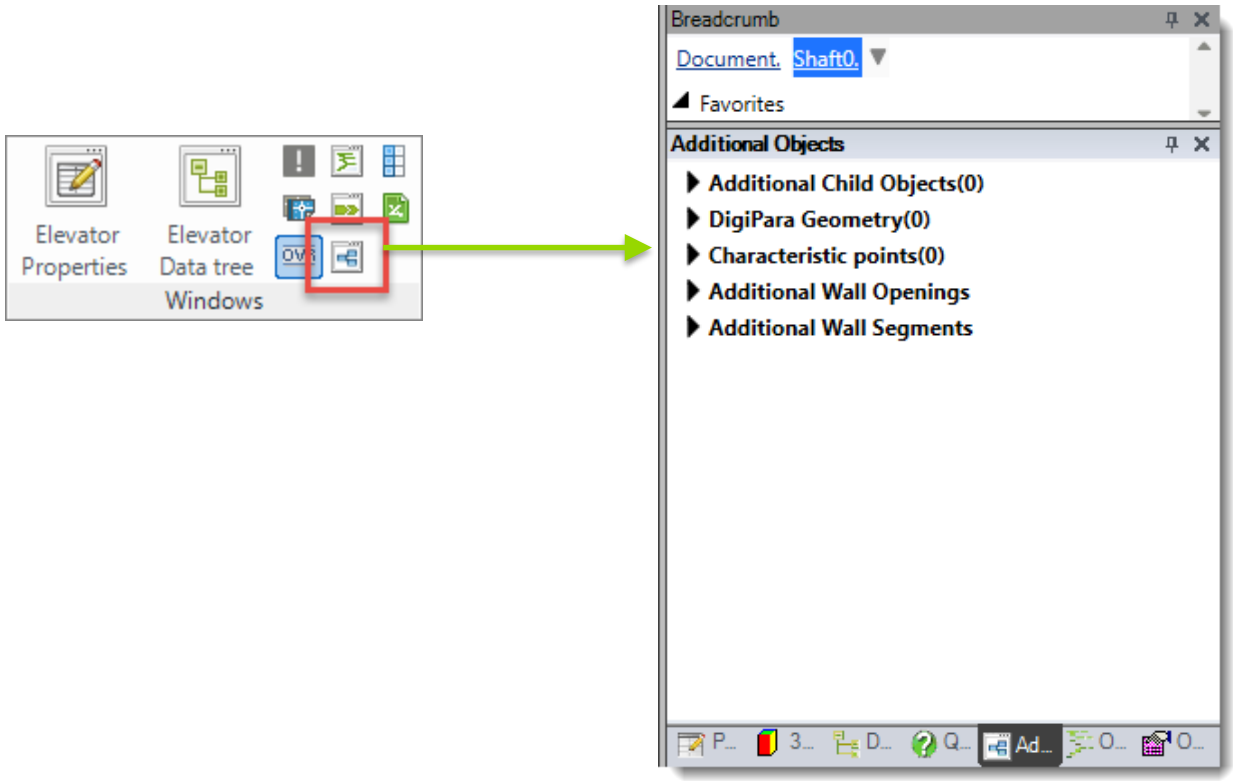
Additional Objects

- Additional Child Objects (User Component)
- Additional Wall Openings
- Additional Wall Segments

Additional Objects

- Activation Docking Window
  - Start ribbon tab → Windows ribbon group



Additional Objects

Additional Child Objects – User Component

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Additional Child Objects – User Component

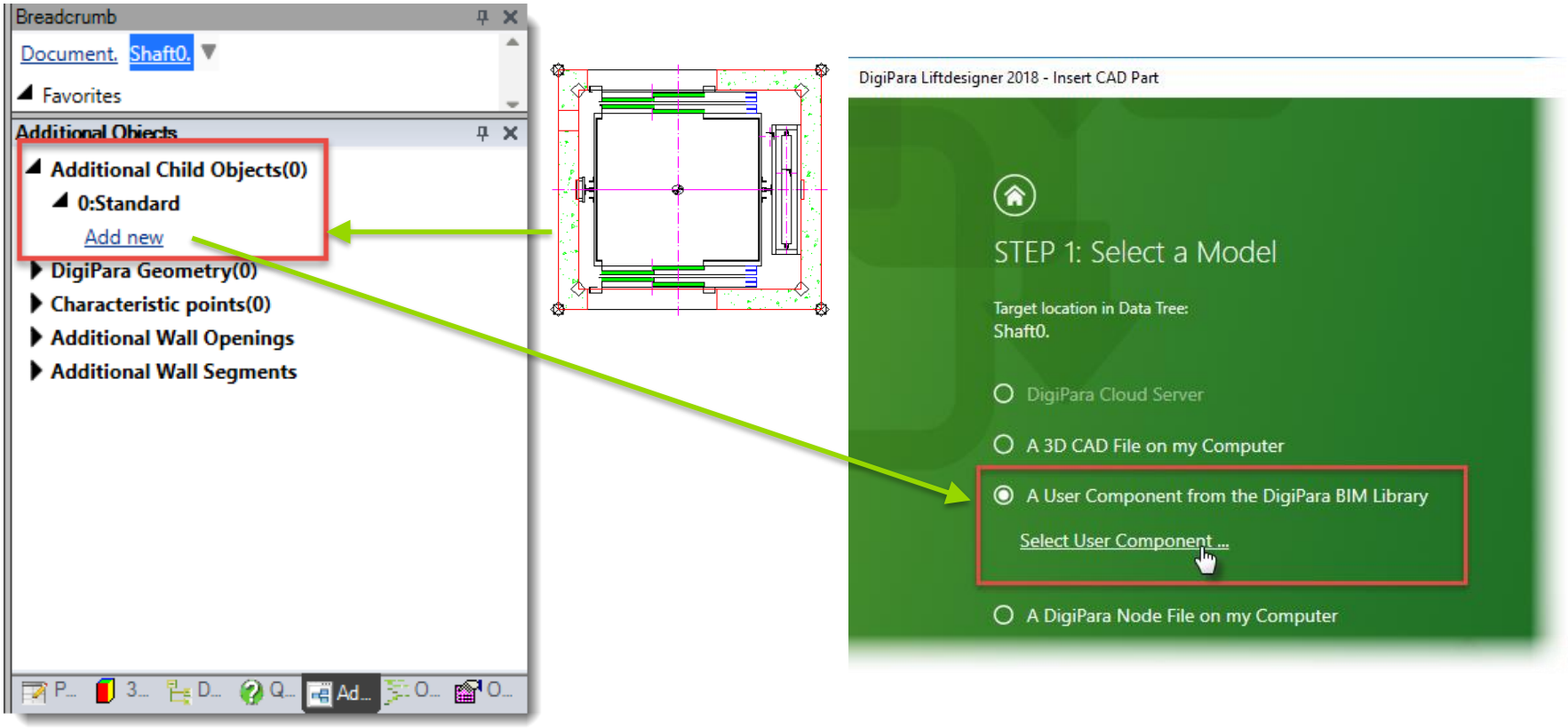
- Can be defined by the user
- Are created on the basis of predefined profile types (I-profile, U-profile, T-profile, etc.)
- Can be used to create additional, non standard geometry in the drawing
- Get created via the corresponding property of the selected shaft component (e.g. the shaft door)

Additional Child Objects – User Component

- Get inserted relatively to the basis point of the selected component.
- Can be created in an unlimited number
- Can contain additional child objects as well
- Are created on a project basis. Additional child objects do not influence the selected basis component permanently.

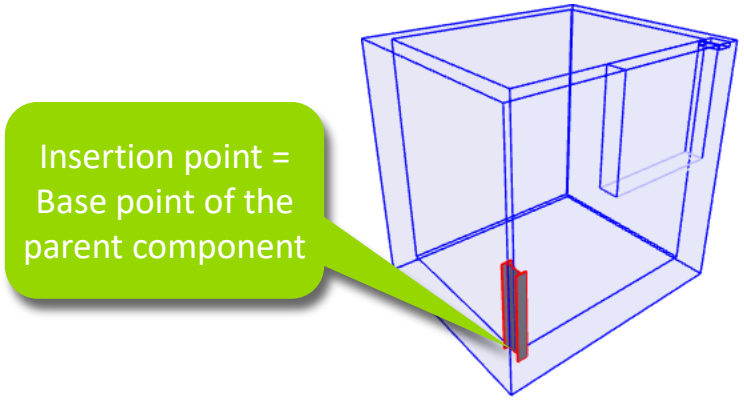
Additional Child Objects – User Component

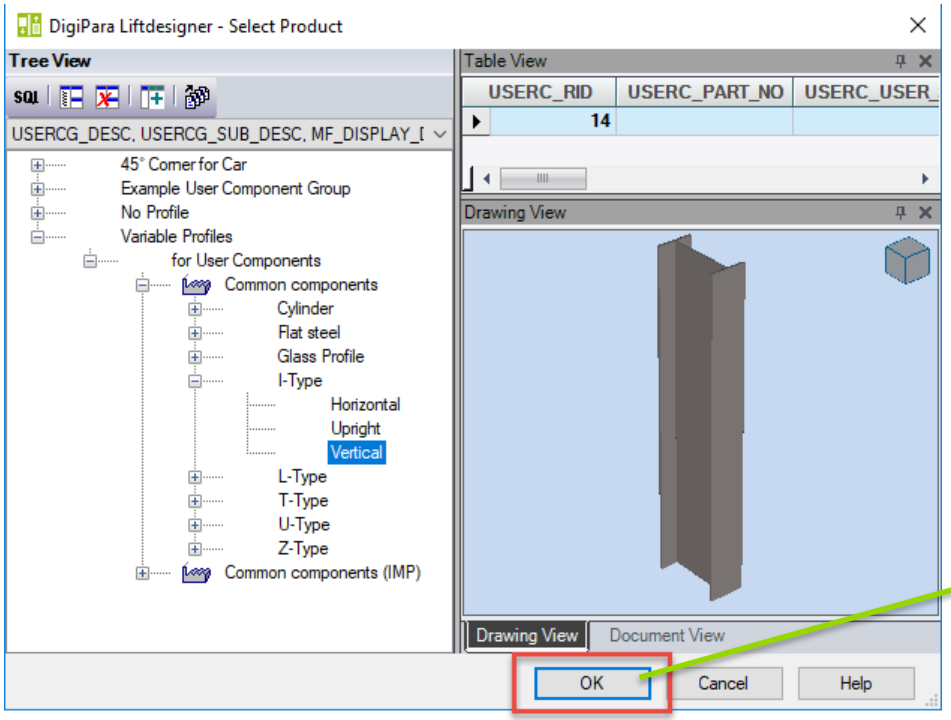
- Create by selecting a parent component (e.g. Shaft) → Additional Child Objects → Add new

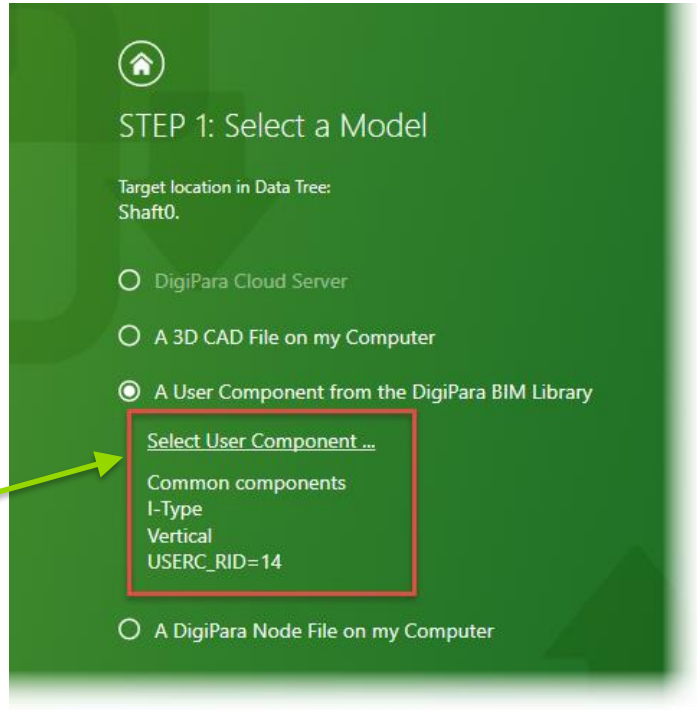


Additional Child Objects – User Component

- Determine the profile type via the Navigator window

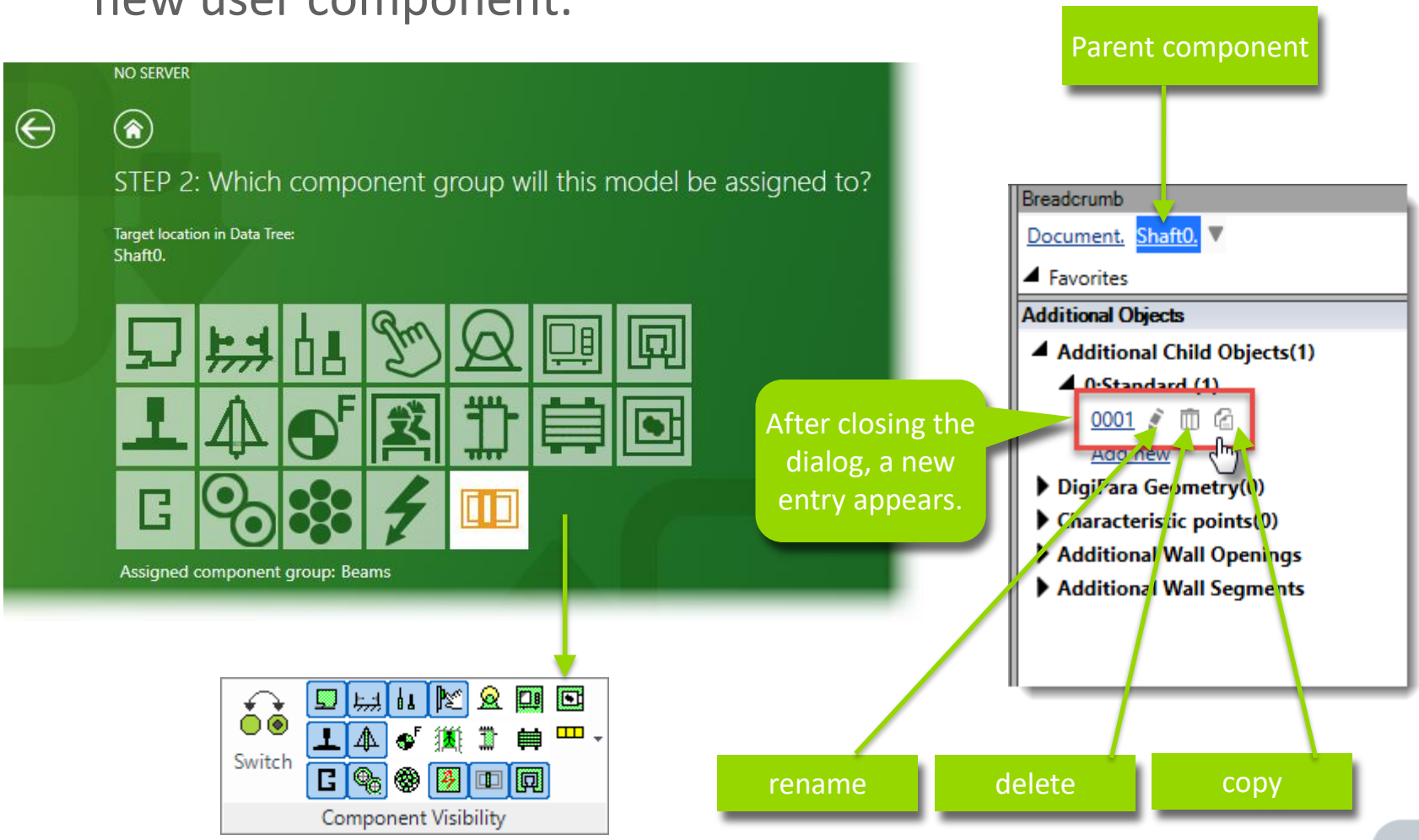






Additional Child Objects – User Component

- Assign the component group to control the visibility of the new user component.



Additional Child Objects – User Component

- Options for customizing the properties of the existing profile

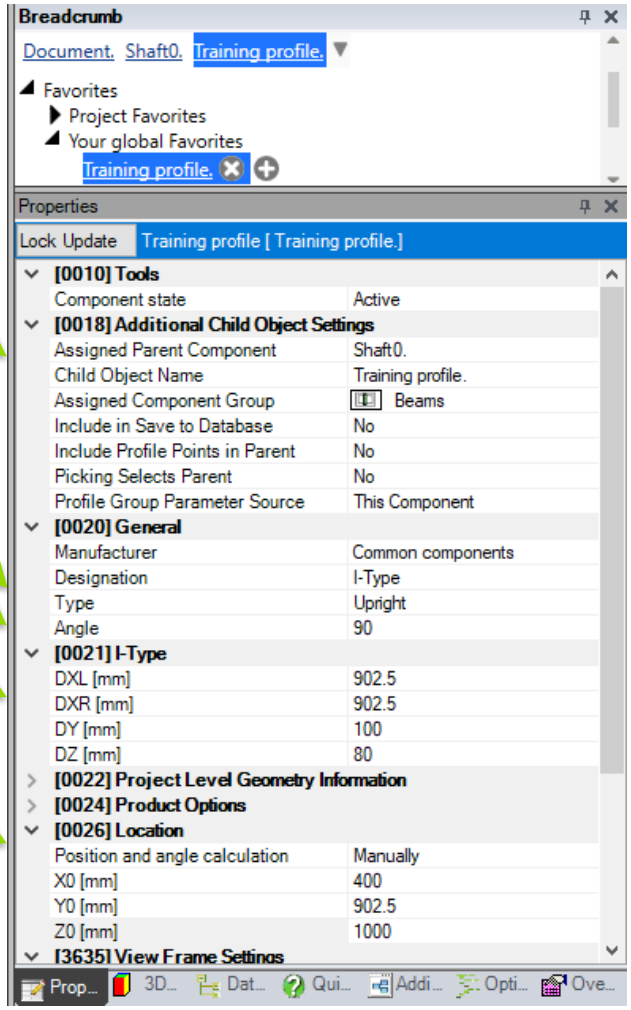
Name

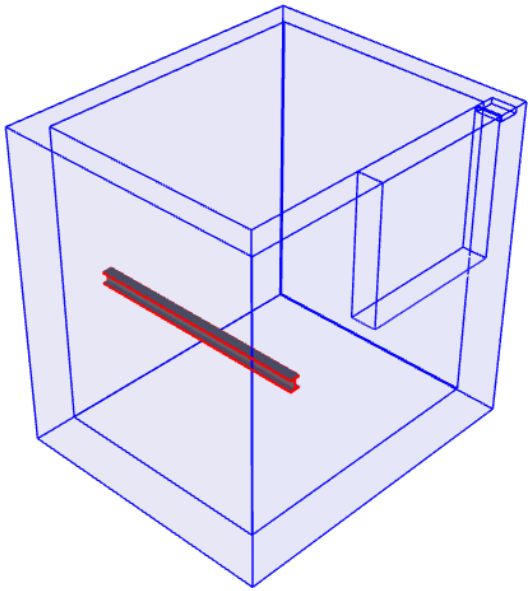
Typ

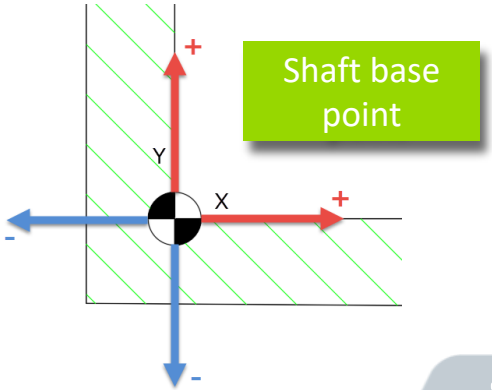
Winkel

Größe

Position







Shaft base point

Additional Objects

Additional Wall Openings

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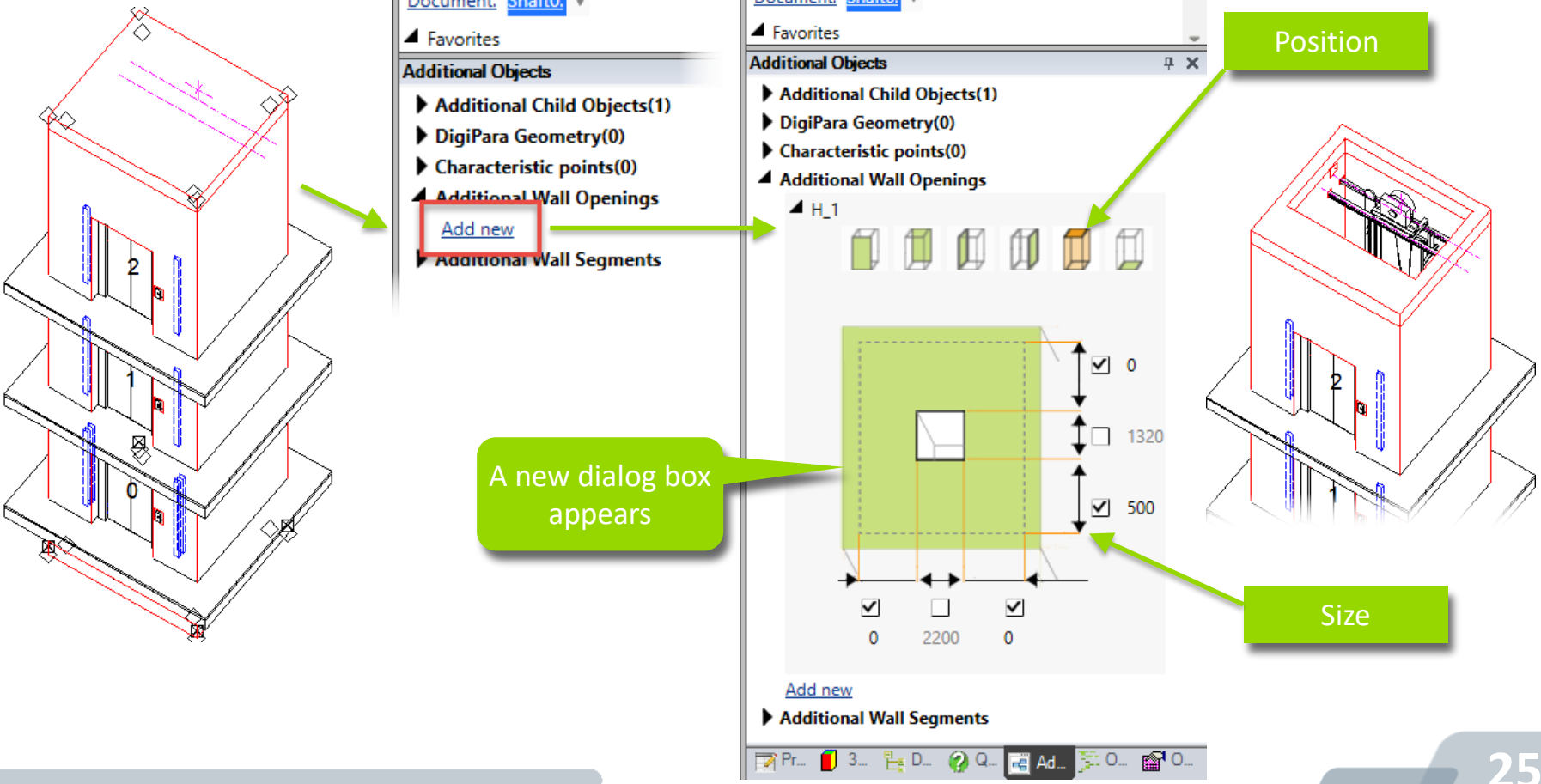
Additional Wall Openings

- Add a new additional wall opening by selecting the Shaft → Additional Wall Openings → Add new



Additional Objects

Additional Wall Segments

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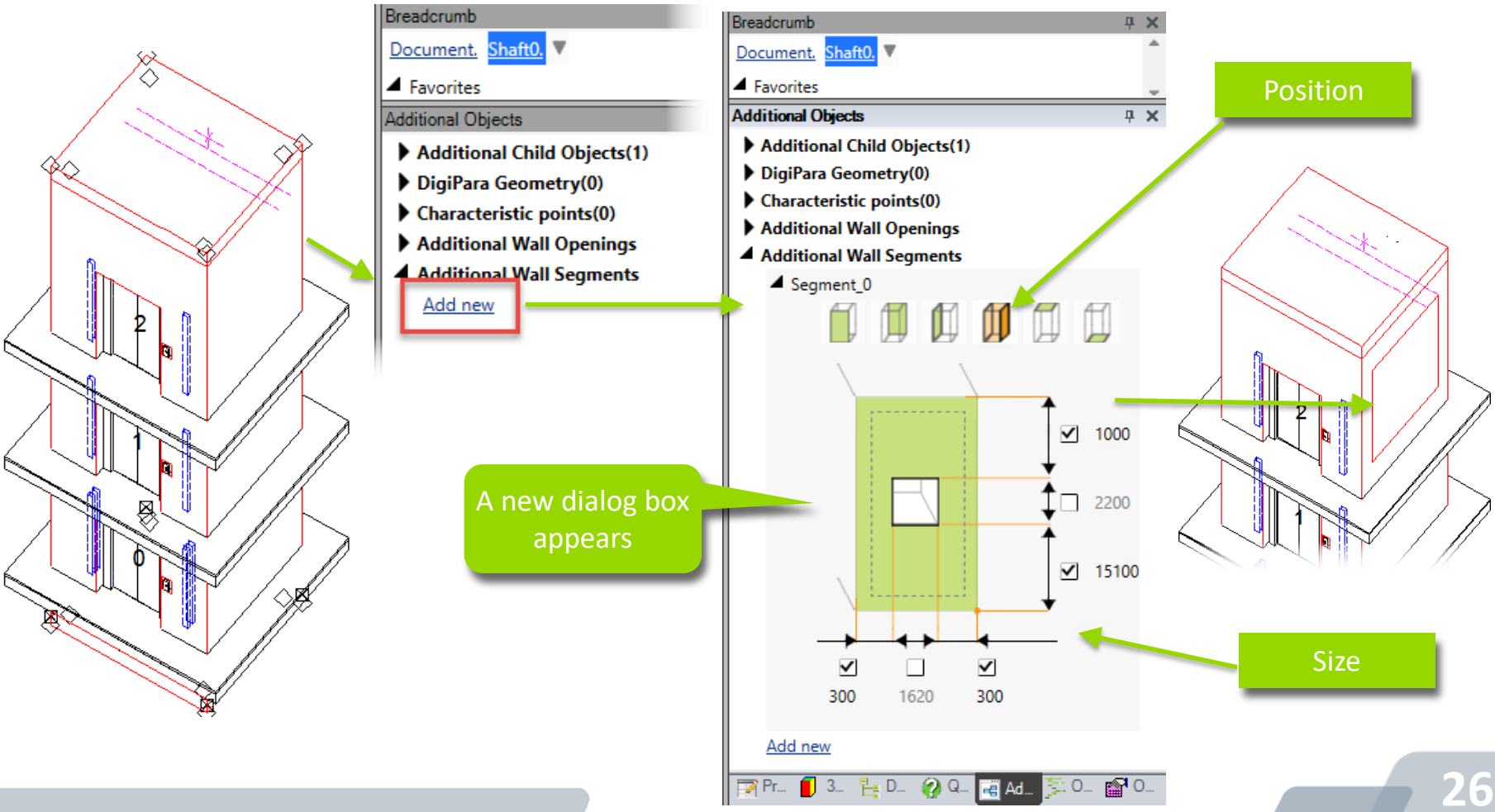
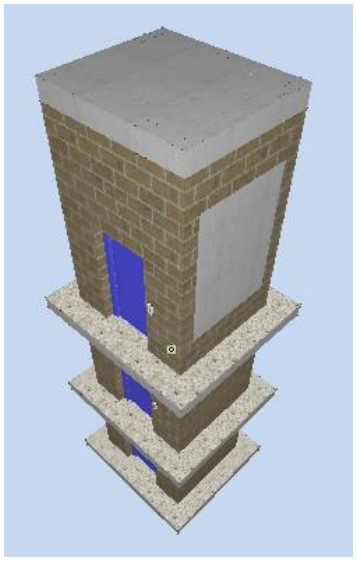
Additional Wall Segments

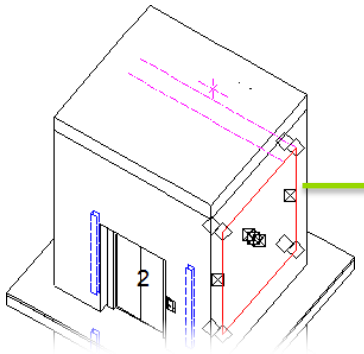
- Add a new additional wall segment by selecting the Shaft → Additional Wall Segments → Add new

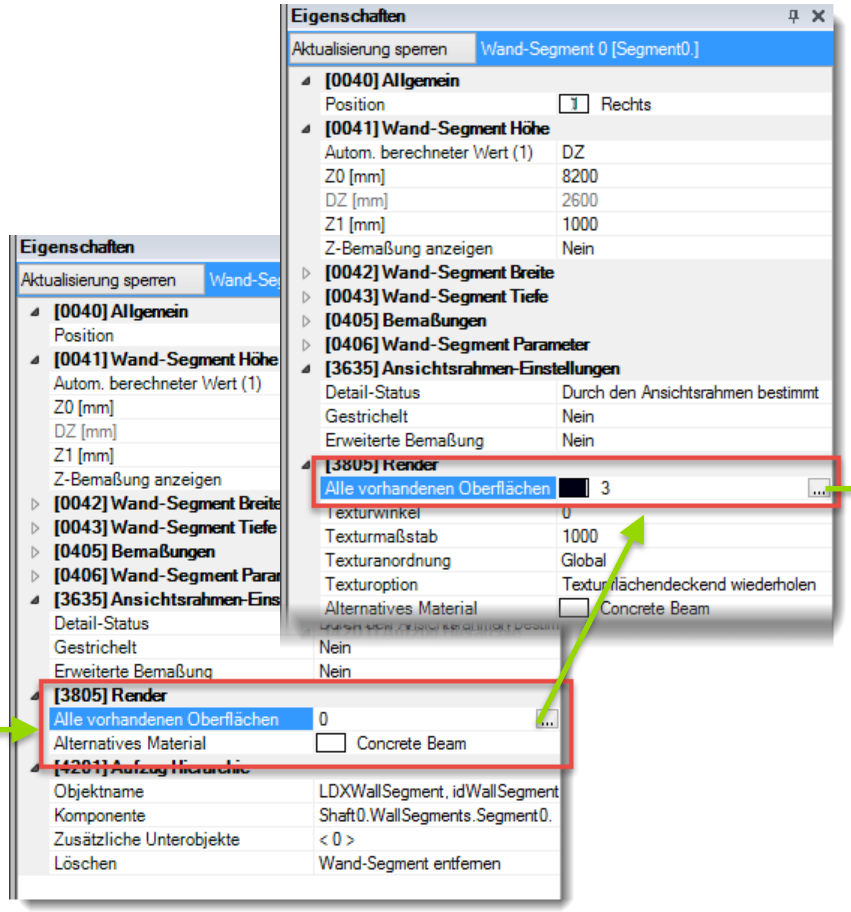


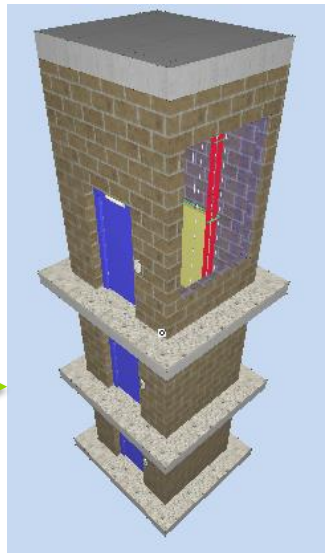
Additional Wall Segments

- Use the properties window of the selected additional wall segment to adjust a specific material









3D Data Exchange

3D & 3D BIM Model - General

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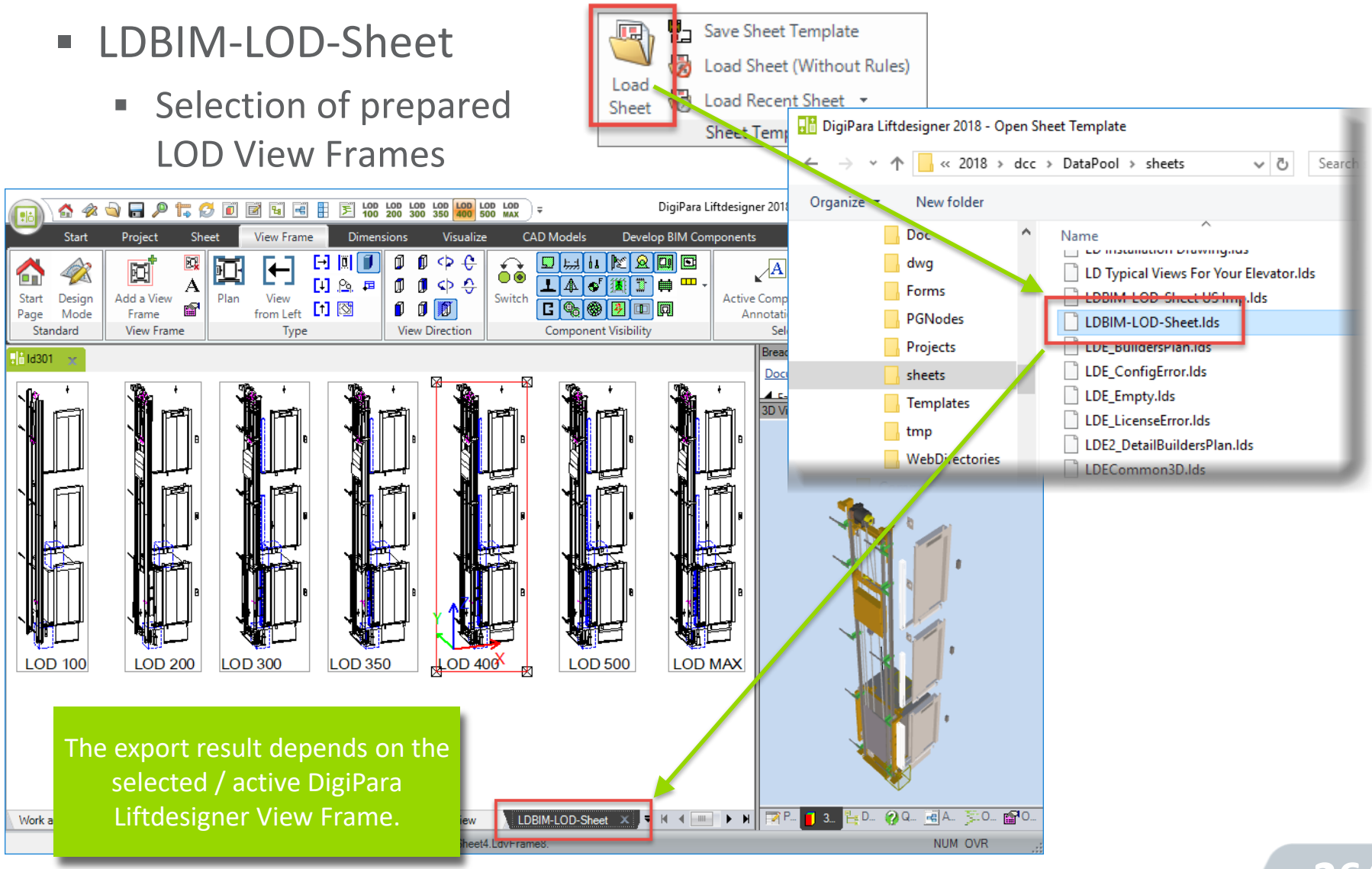
3D & 3D BIM Model - General

- LDBIM-LOD-Sheet
  - Selection of prepared LOD View Frames



The export result depends on the selected / active DigiPara Liftdesigner View Frame.

3D Data Exchange

3D & 3D BIM Model – IFC & STEP

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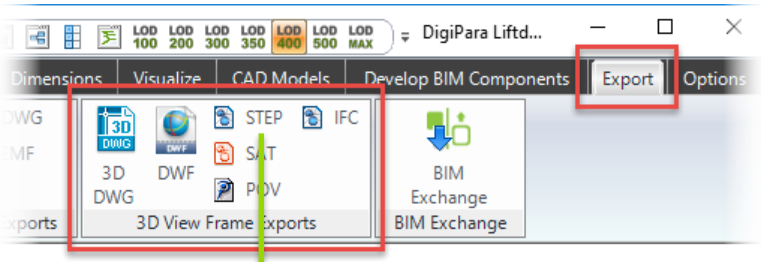
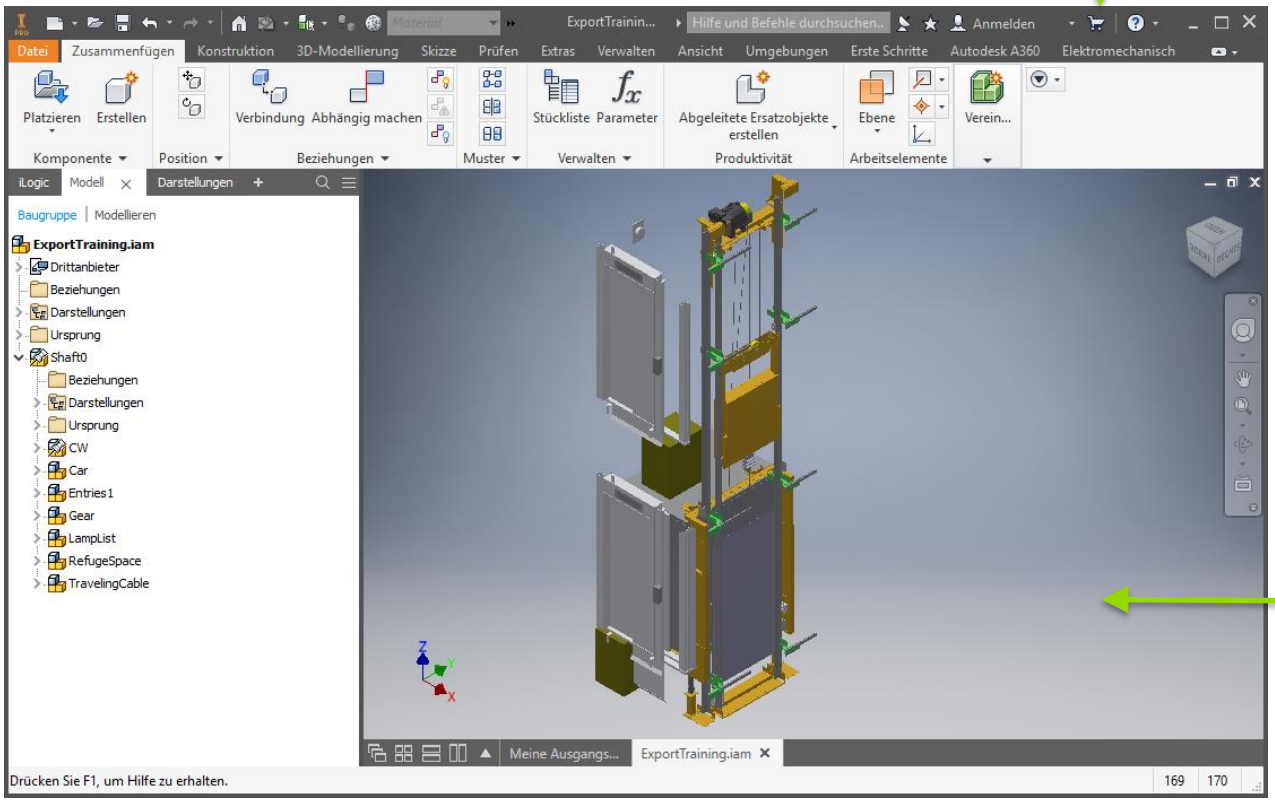
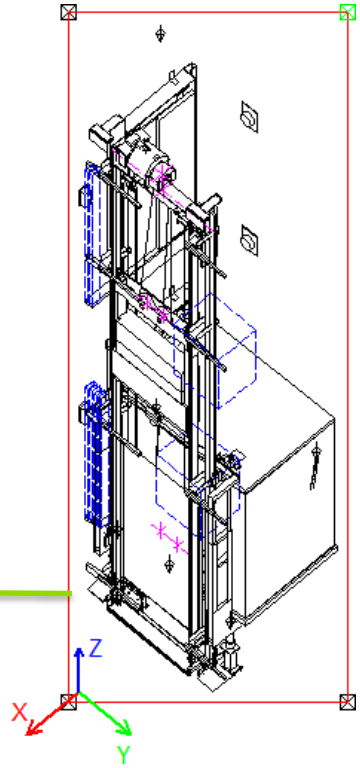
3D & 3D BIM Model Export

- DigiPara Liftdesigner
  - supports e.g. the following 3D drawing outputs formats:
    - 3D DWG, STEP, IFC, Etc.







3D Data Exchange

3D & 3D BIM Model – BIM Exchange

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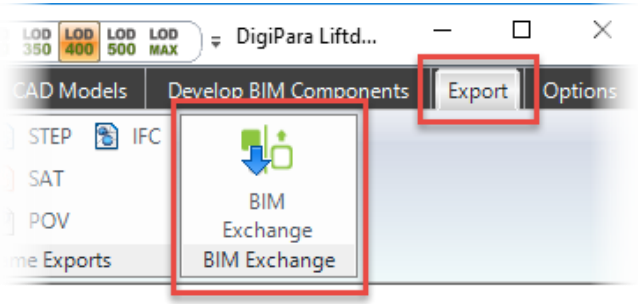
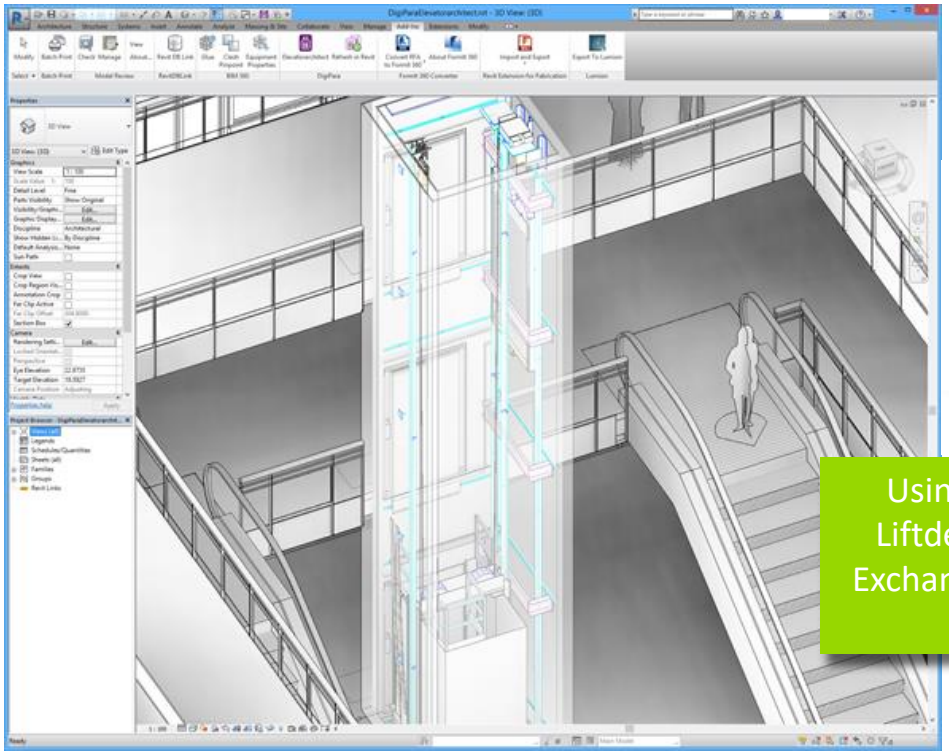
3D & 3D BIM Model Export

- DigiPara Liftdesigner 3D BIM Exchange
  - Building Information Modeling
    - Method of optimized design, implementation and management of buildings. All relevant building data are digitally recorded, combined and networked.





Using the DigiPara Liftdesigner 3D BIM Exchanges in Autodesk Revit

Cabin Configurator

Cabin Design

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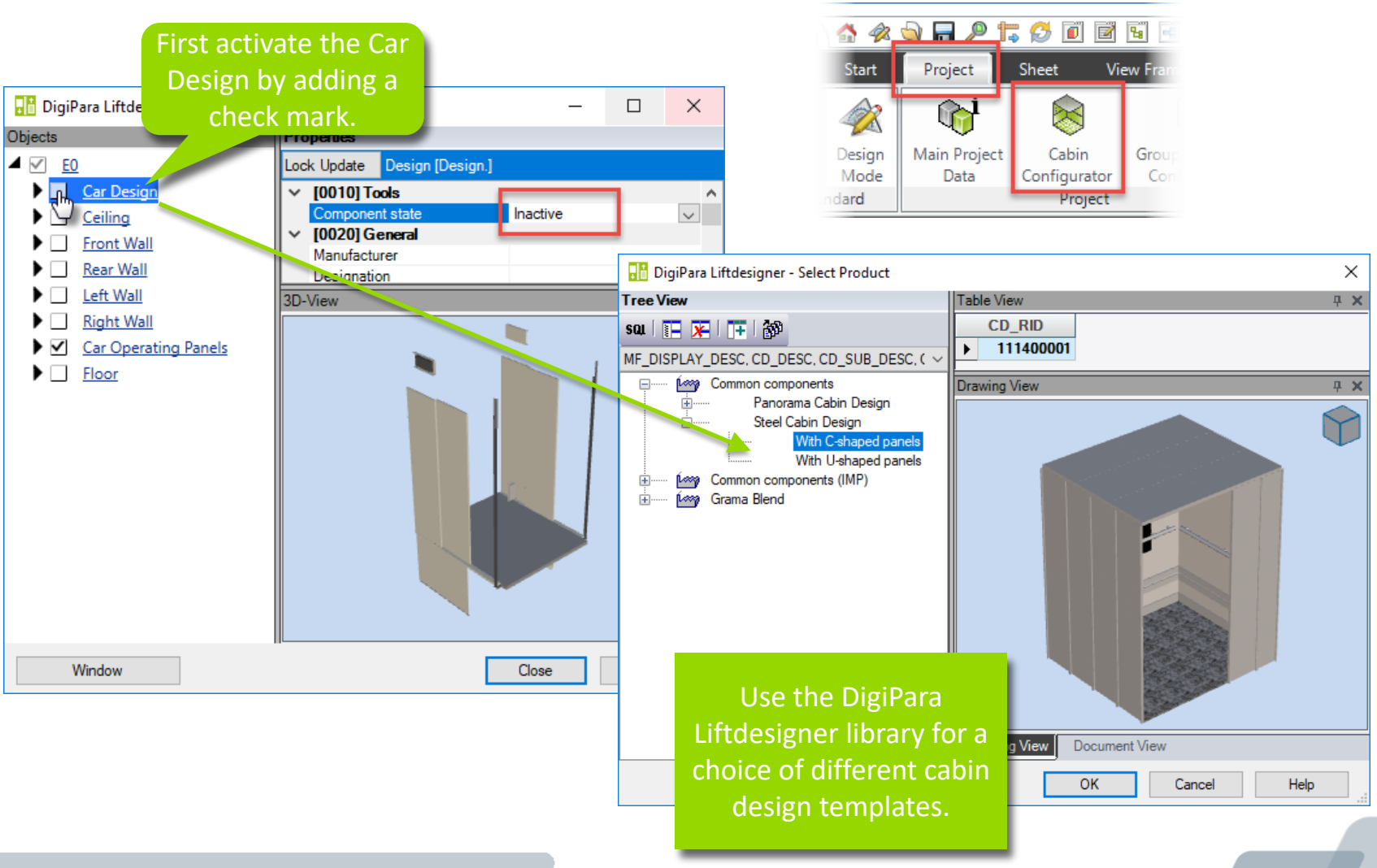
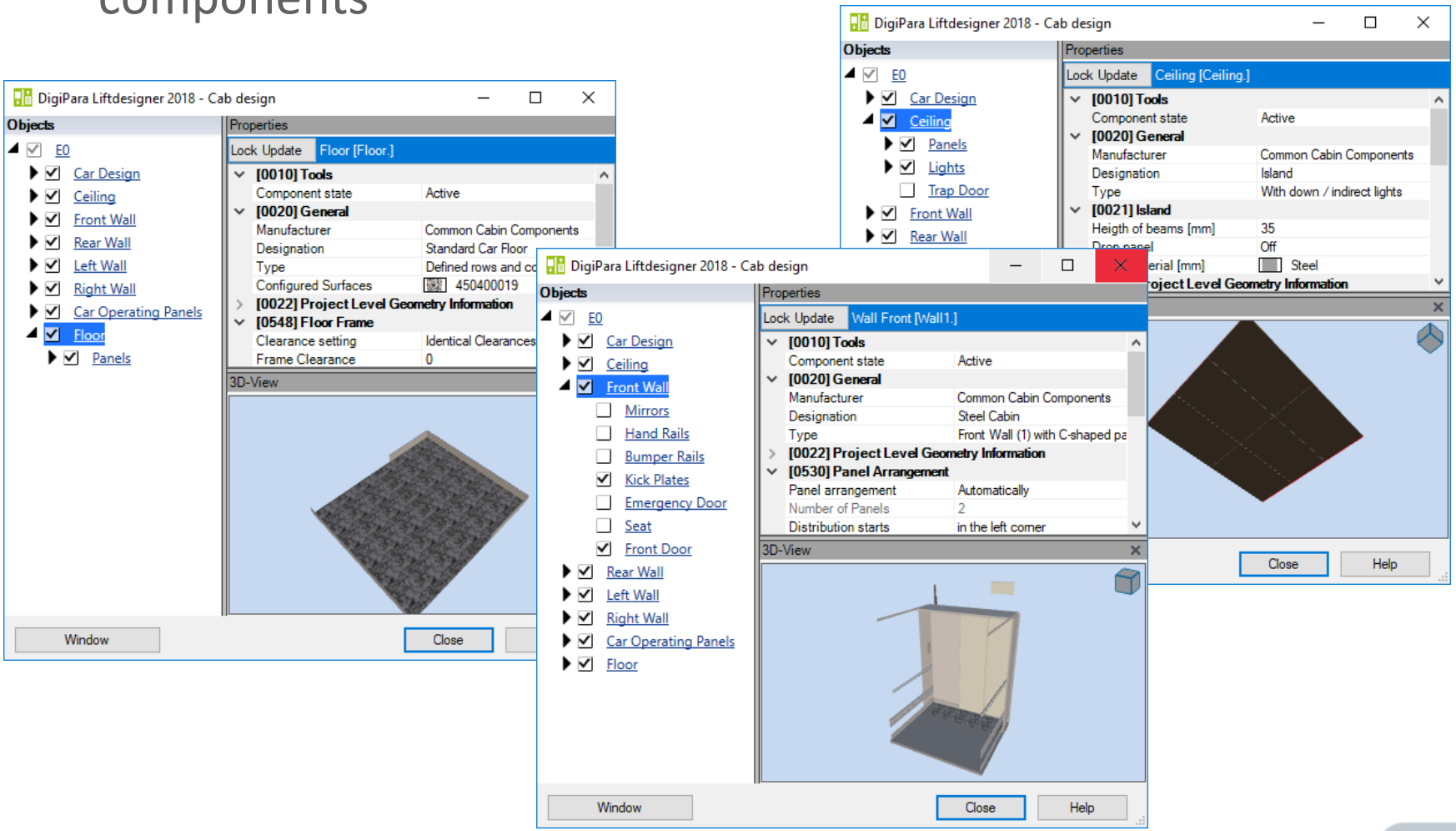
Cabin Configurator - Cabin Design

- Activation of the Cabin Design via the Cabin Configurator



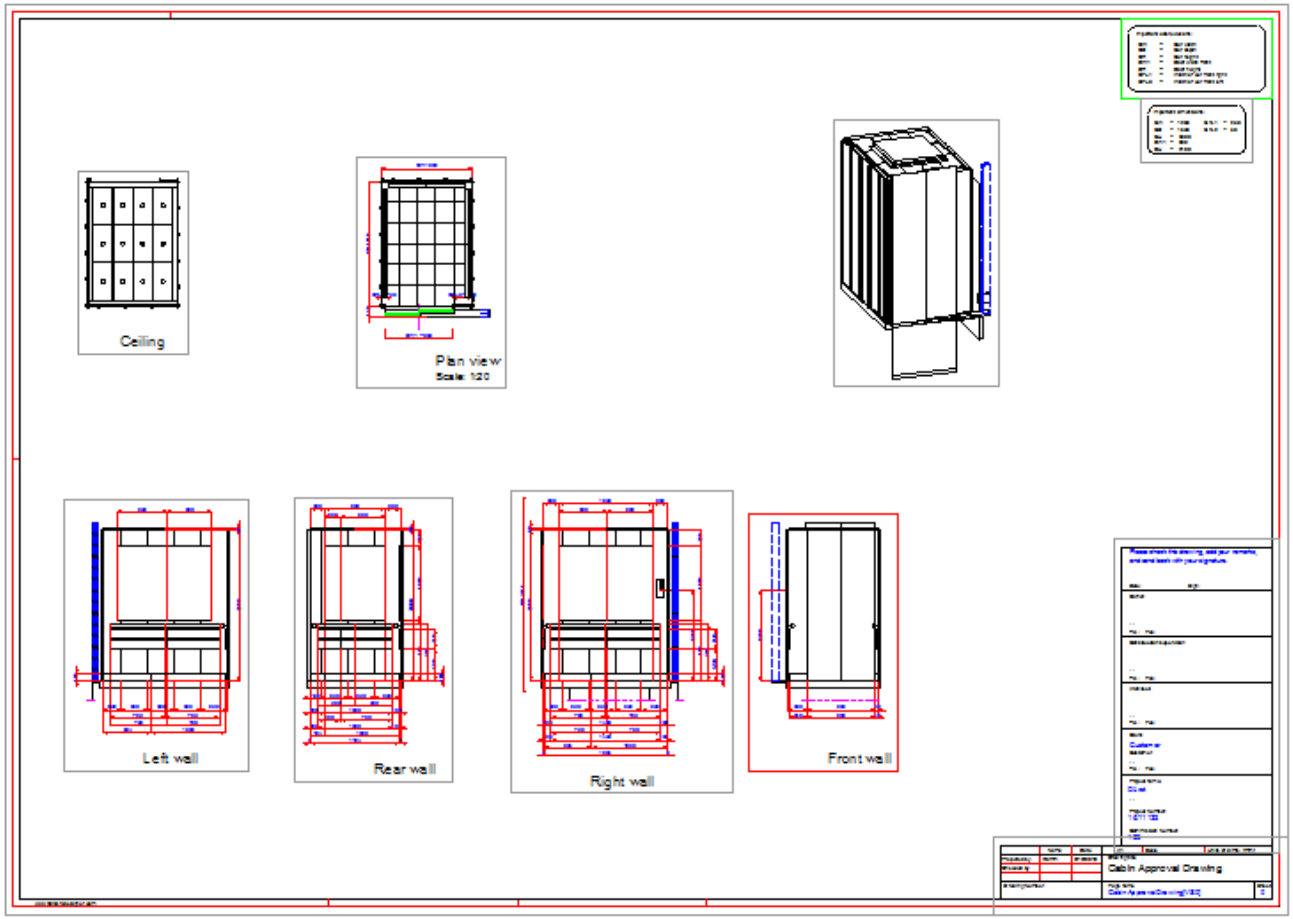
Cabin Configurator - Cabin Design

- Adaptation of car parameters and car-related BIM components



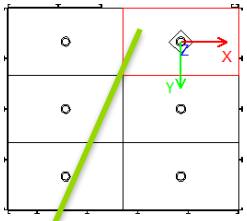
Cabin Configurator - Cabin Design

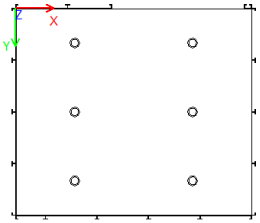
- A prepared CabinApprovalDrawing will be loaded automatically when the Cabin Configurator is finished.

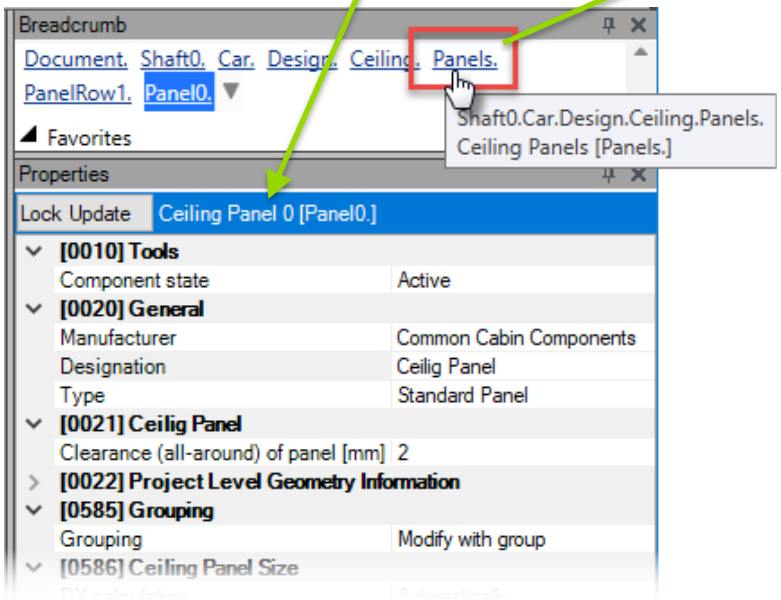


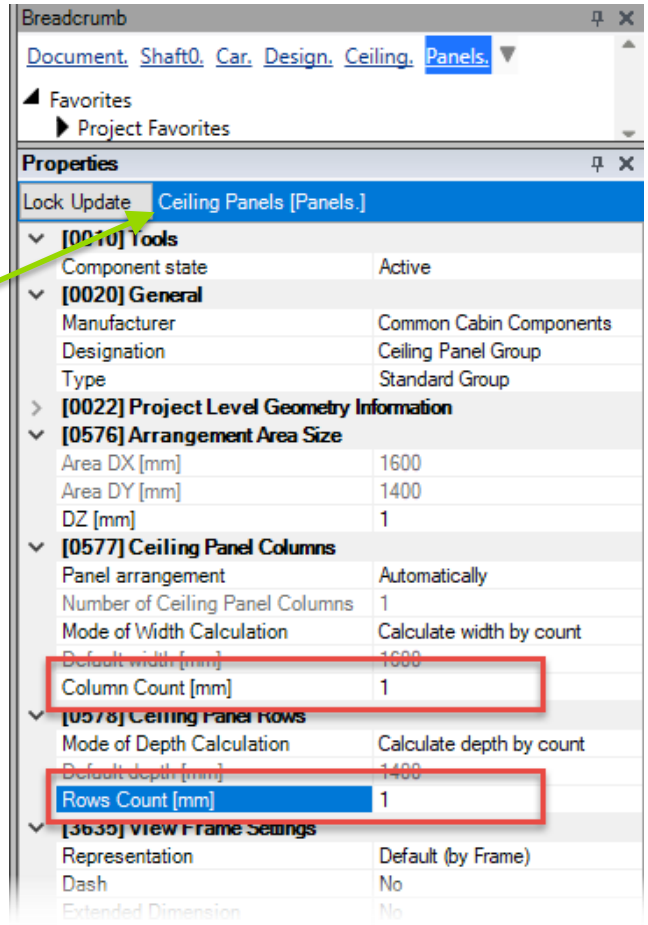
Cabin Configurator - Cabin Design

- Adjustment of the column and row numbers of the ceiling panels









Practice

Custom Sheet Template

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Practice - Custom Sheet Template

- Title Block & Drawing Border (C:\ProgramData\DigiPara\dcc\DataPool\blocks)
  - Develop your own individual title block, using your original pattern, including necessary DigiPara Liftdesigner references and a corresponding drawing border.

- View Frames (C:\ProgramData\DigiPara\dcc\DataPool\sheets\MyViews)
  - Define view frames according to your own requirements.

- Sheet Templates
  (C:\ProgramData\DigiPara\dcc\DataPool\sheets)
  - Put title block, drawing border and view frames together. Save the sheet template in the required directory.

Thank you for your attention!

If you have any problems or questions, please don‘t hesitate to contact us.

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@DigiParaTeam

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