digipara® liftdesigner

Product Loading of BIM components

Recommendation

ONLINE TRAINING

Are you an attendee in a DigiPara Liftdesigner online training module?

We recommend to print these out in advance so that you have a handout for your own editing and for your notes during your training.

Agenda

PL1.1 General Information

- Product Loading Workflow

PL1.2 Typical Processes

- Necessary steps to create own components in the database.

PL1.3 Optional Steps

- Optional steps to create product options or logics for own components in the database.

Agenda

PL1.4 BIM related settings

- Typical settings for "DigiPara Simplified BIM Profiles"

PL1.5 Library expansion

- Quick expansion of data tables through targeted copy operations.

PL1.6 Distribution

- Export and share your modified *.ldm12 file

Agenda

PL1.7 Additional training materials

- Profiles with user defined contour

  Replace the default standard profiles with individual contours for profiles.

PL1.8 Summary

- Custom Q&A’s

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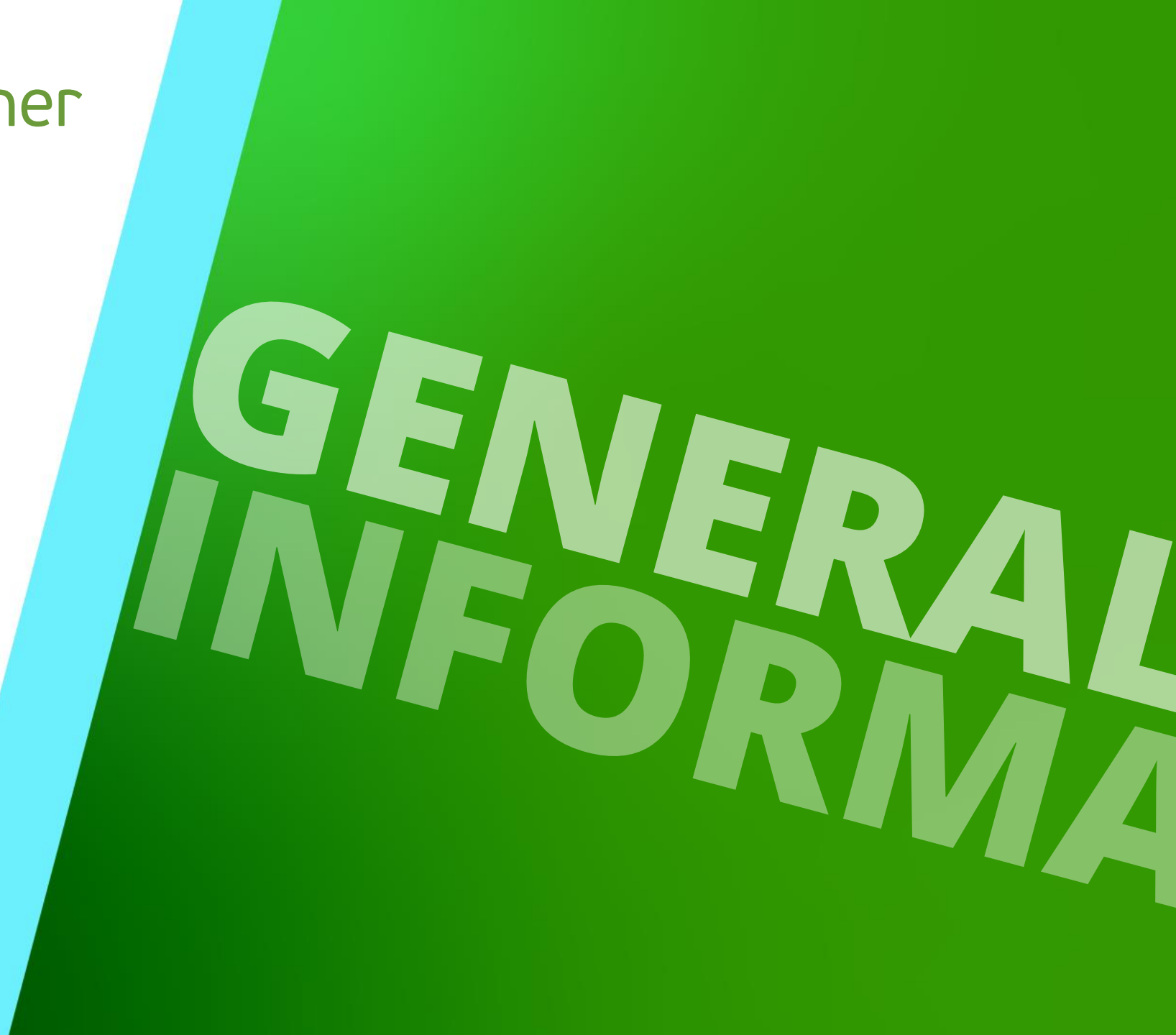
PL1.1

General Information



Product Loading Workflow

PL1.1 GENERAL INFORMATION

Typical Processes

- Copy a similar BIM Component
- Edit the Meta Data
- Load your edited BIM Component
- Load the Developer Work Area
- Use Explanation of Parameters and Values
- Modify the simplified 3D Geometry
- Save the BIM Component back into the DigiPara BIM Library

Optional Steps

- Dynamic Properties Example 1

  Direct input of any values in the DigiPara Liftdesigner BIM Component Properties Window.

- Dynamic Properties Example 2

  Choose between own defined values in the DigiPara Liftdesigner BIM Component Properties Window.

- Product Options / Sub Grouping

  Switch on or off profile groups in the DigiPara Liftdesigner BIM Component Properties Window.

- BIM Component Rules

  Add logic that is related to your BIM Component.

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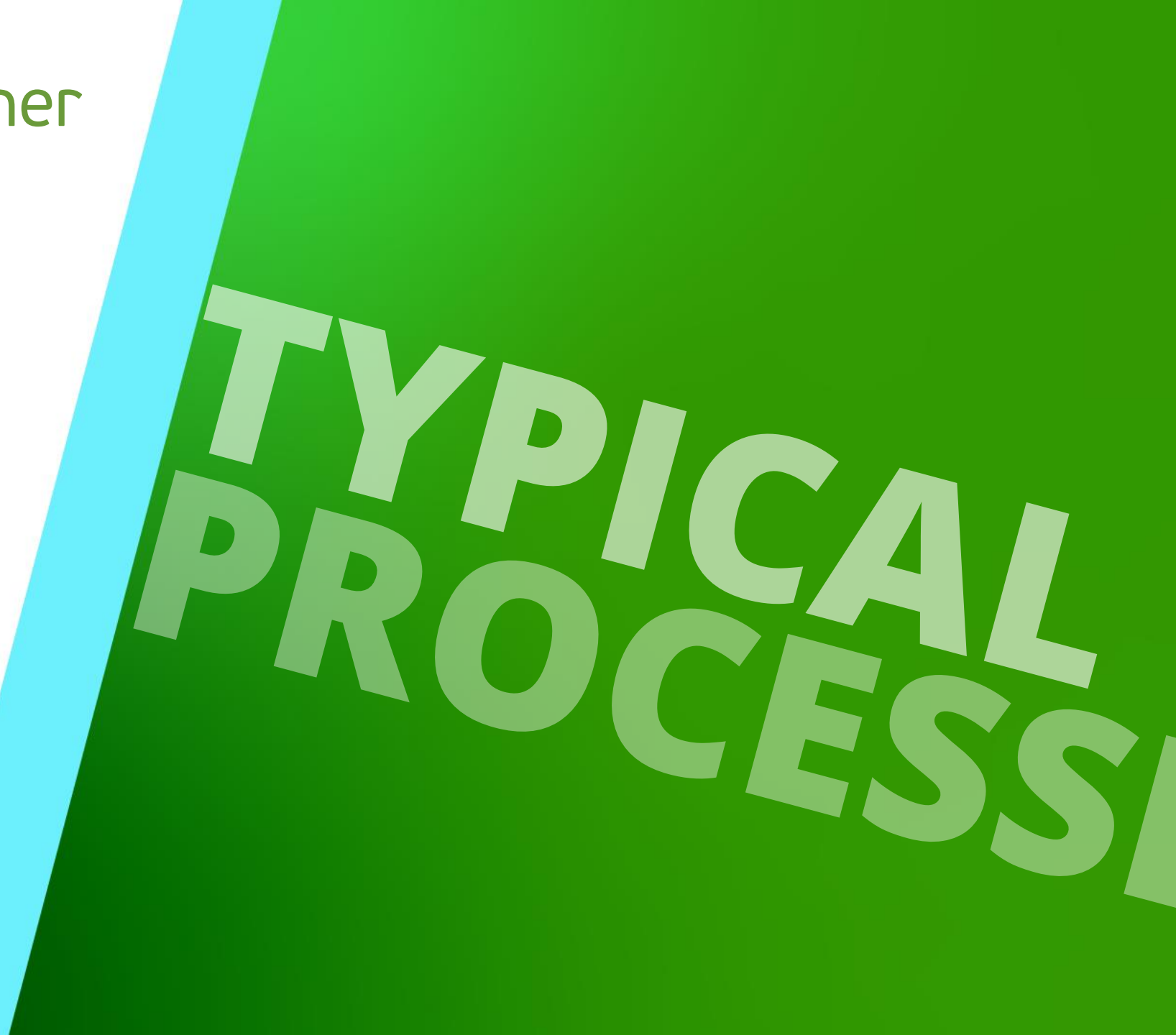
PL1.2

Typical Processes

Simple Pit Base Unit



Copy a similar BIM Component

Copy a similar BIM Component

PL1.2 TYPICAL PROCESSES

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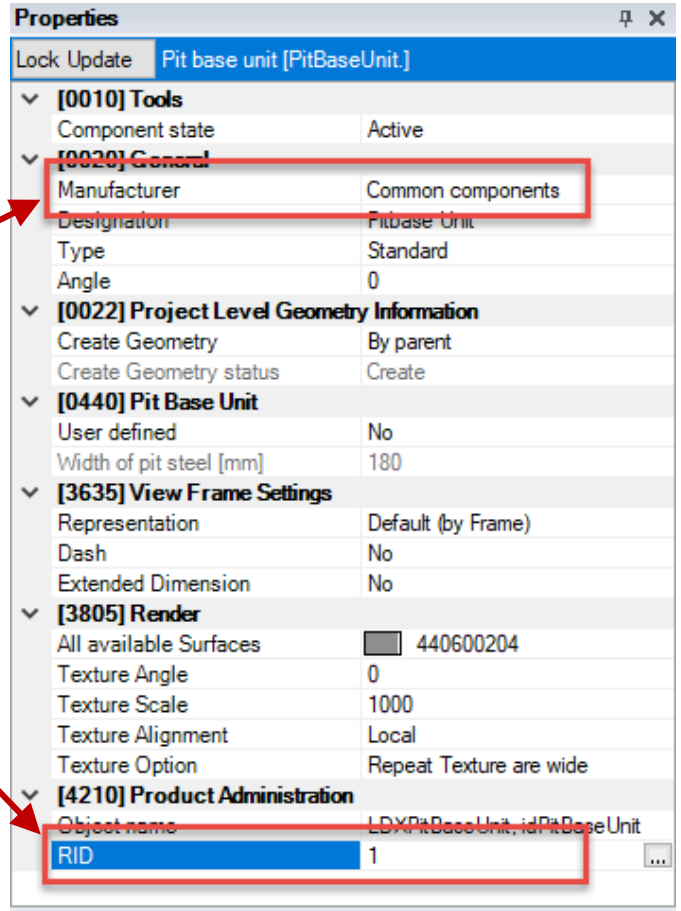
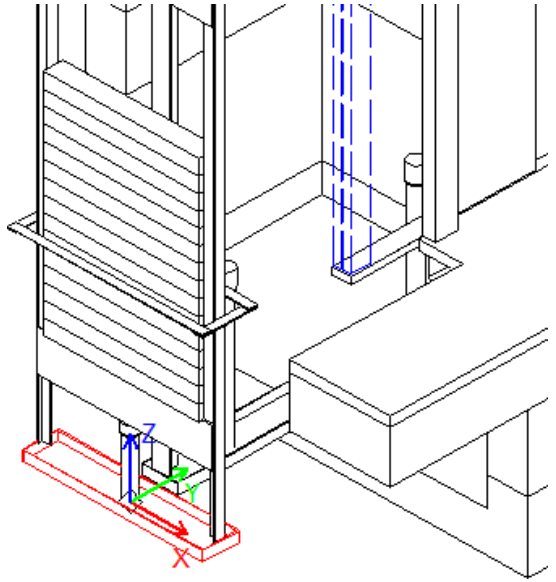
Find a similar BIM Component

- in DigiPara Liftdesigner

Find out:

- Manufacturer / BIM Library
- Unique RID number



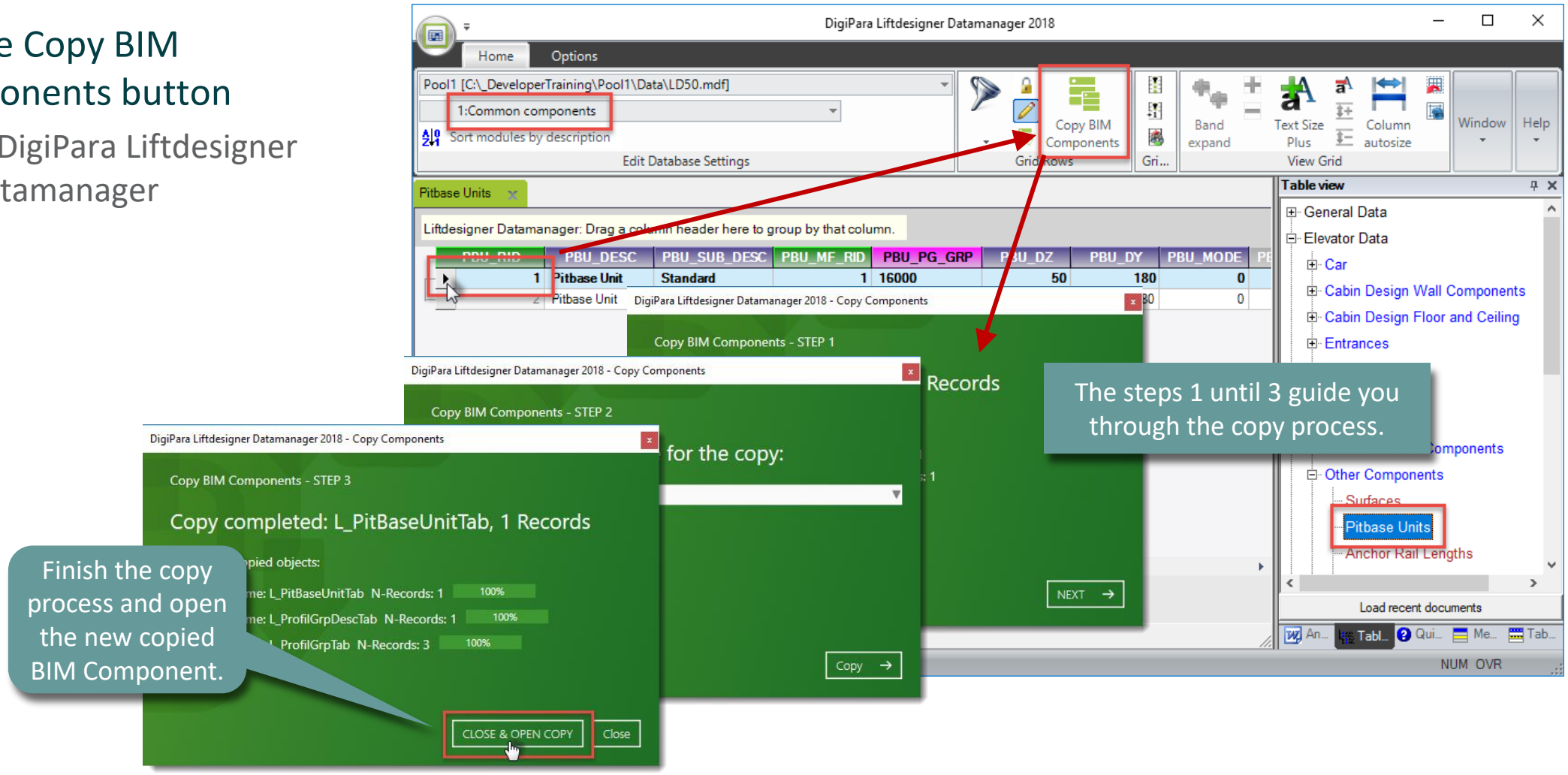


Copy a similar BIM Component

PL1.2 TYPICAL PROCESSES

via the Copy BIM Components button

- in DigiPara Liftdesigner Datamanager



Edit the Meta Data

PL1.2 TYPICAL PROCESSES

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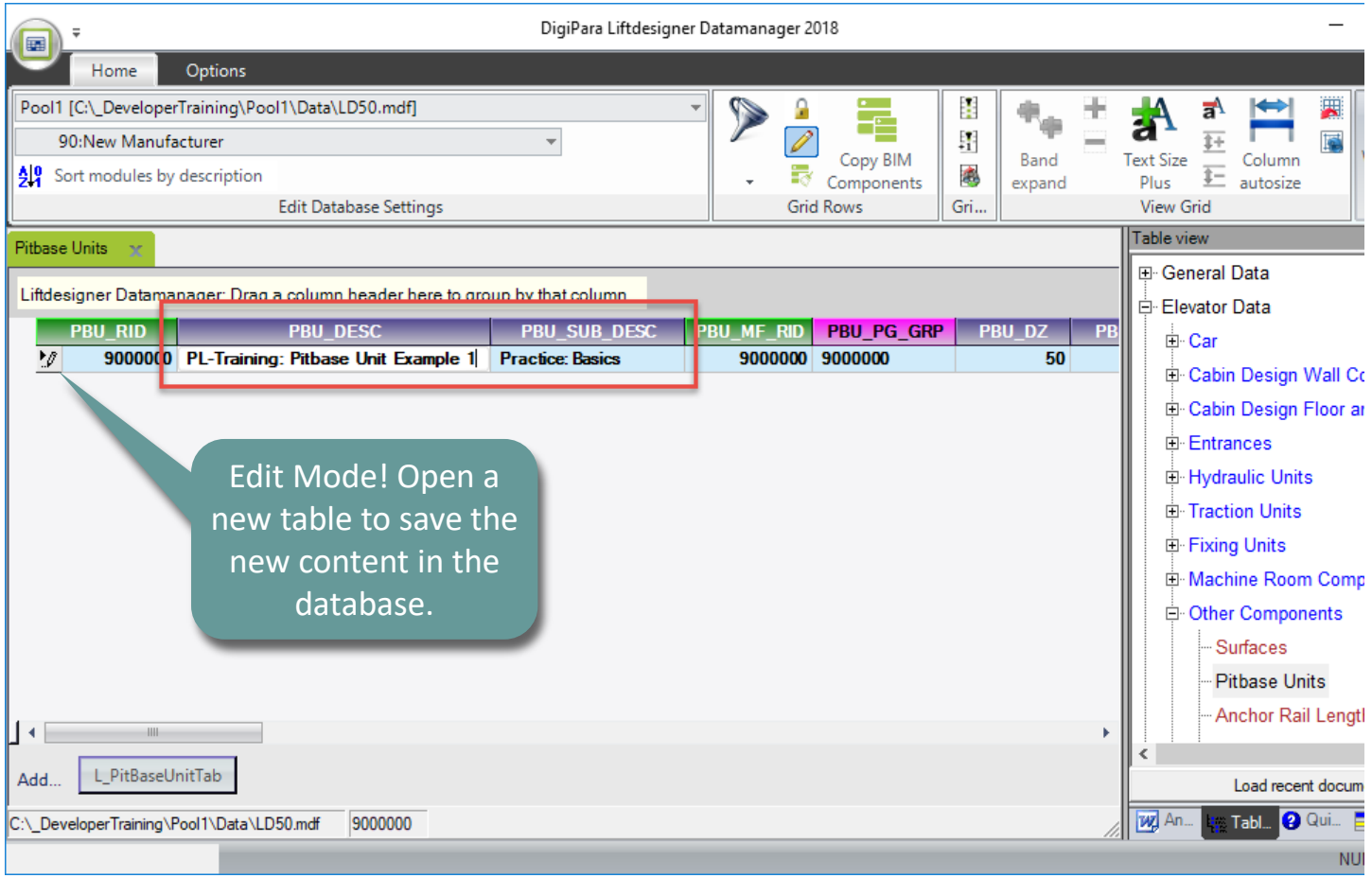
Add a new specific description for the new copied BIM Component.

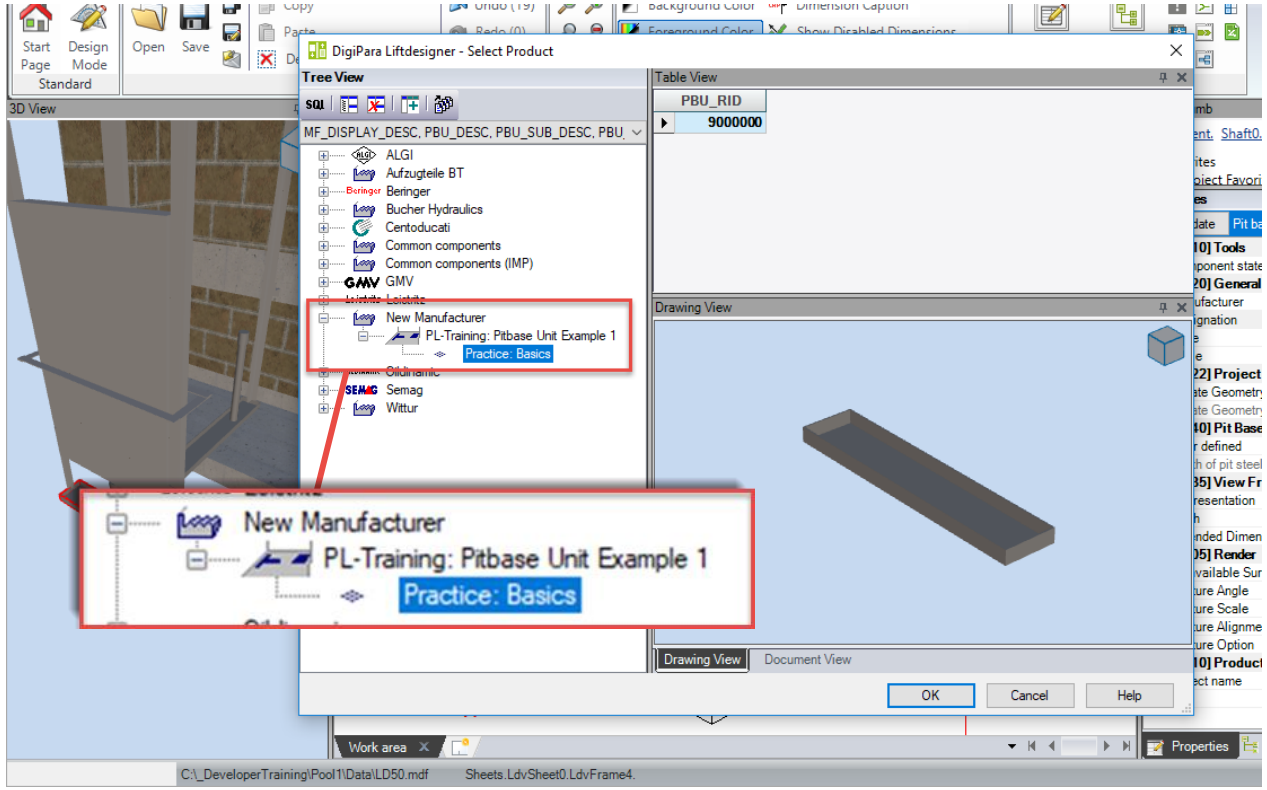
- in DigiPara Liftdesigner Datamanager
- The new BIM Component is copied with all parameter and values into the new DigiPara BIM Library.



Load your edited BIM Component

PL1.2 TYPICAL PROCESSES

If the new DigiPara BIM Library contains a corresponding BIM Component, it will be displayed in the DigiPara Liftdesigner navigator.



Load the Developer Work Area

PL1.2 TYPICAL PROCESSES

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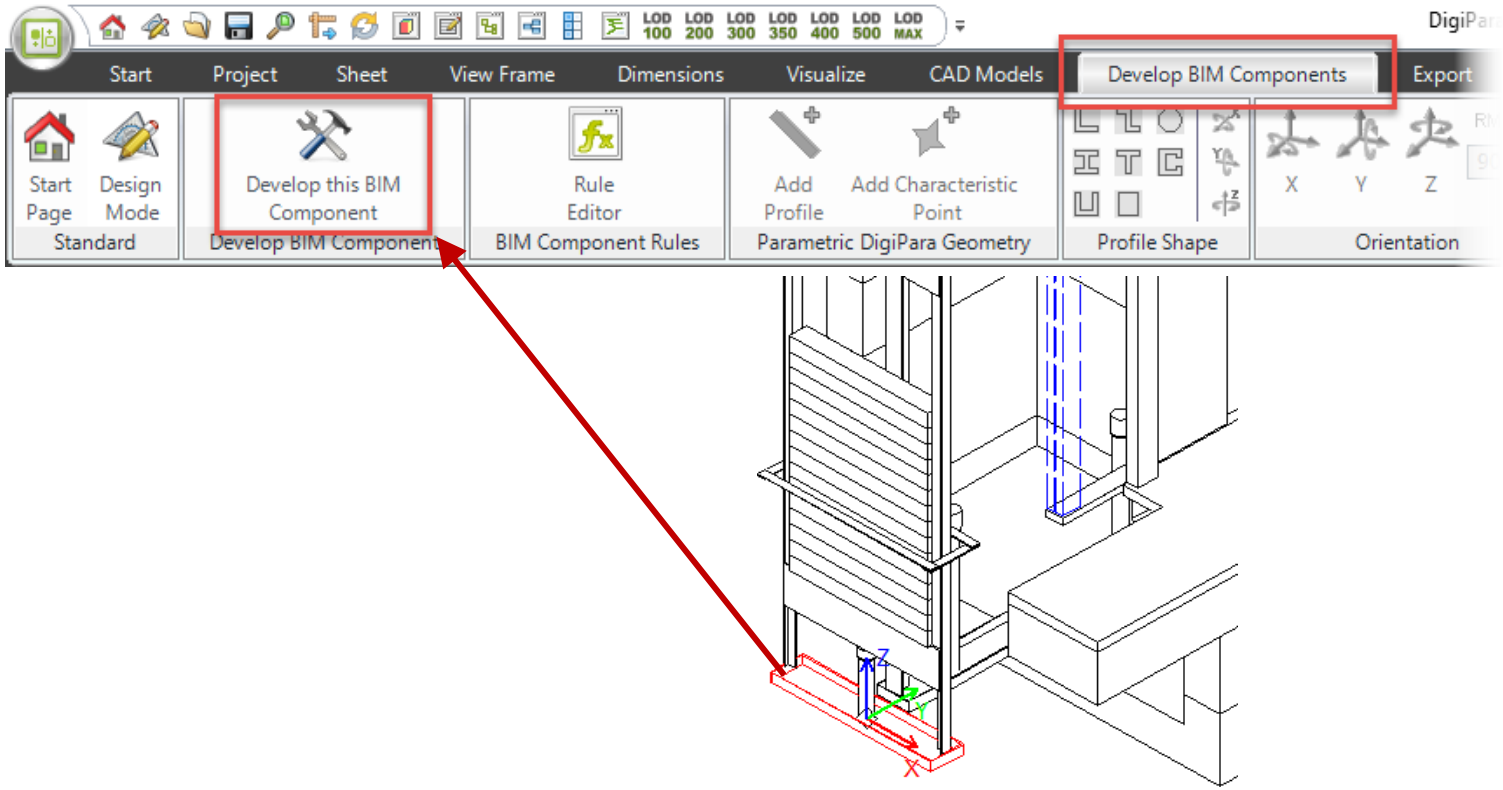
Select the corresponding BIM Component in an existing view frame and click on the button:

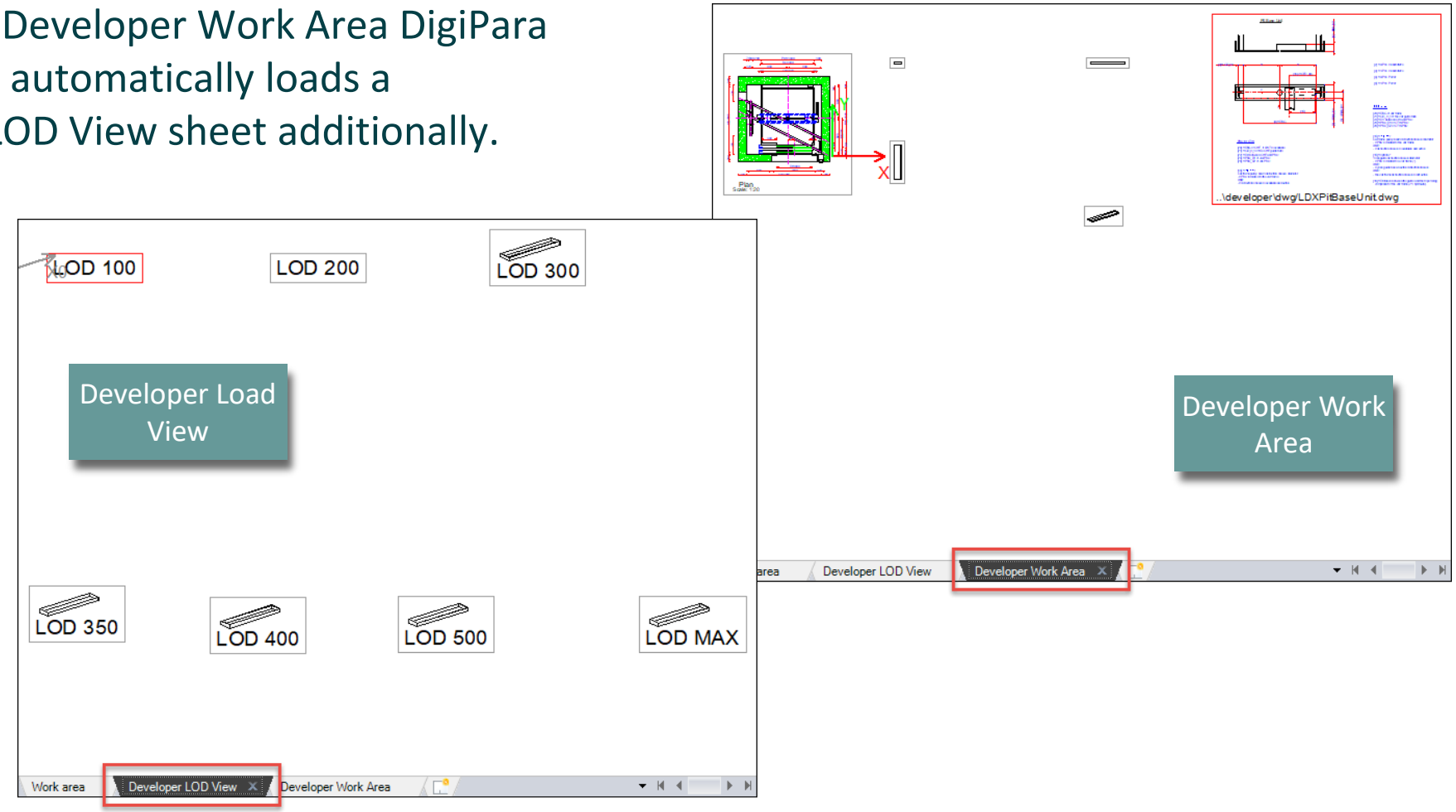
- Develop this BIM Component in DigiPara Liftdesigner



Load the Developer Work Area

PL1.2 TYPICAL PROCESSES

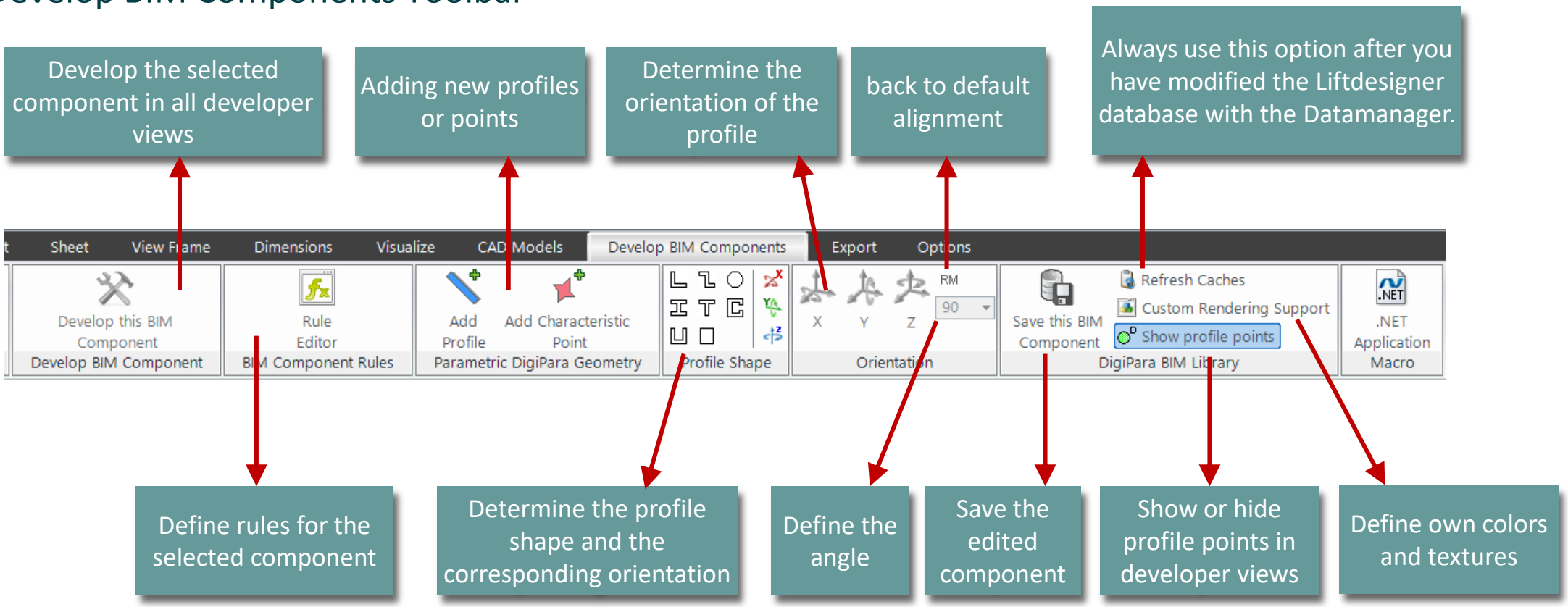
Next to the Developer Work Area DigiPara Liftdesigner automatically loads a Developer LOD View sheet additionally.



Load the Developer Work Area

PL1.2 TYPICAL PROCESSES

Develop BIM Components Toolbar



Modify the simplified 3D Geometry

Modify the simplified 3D Geometry

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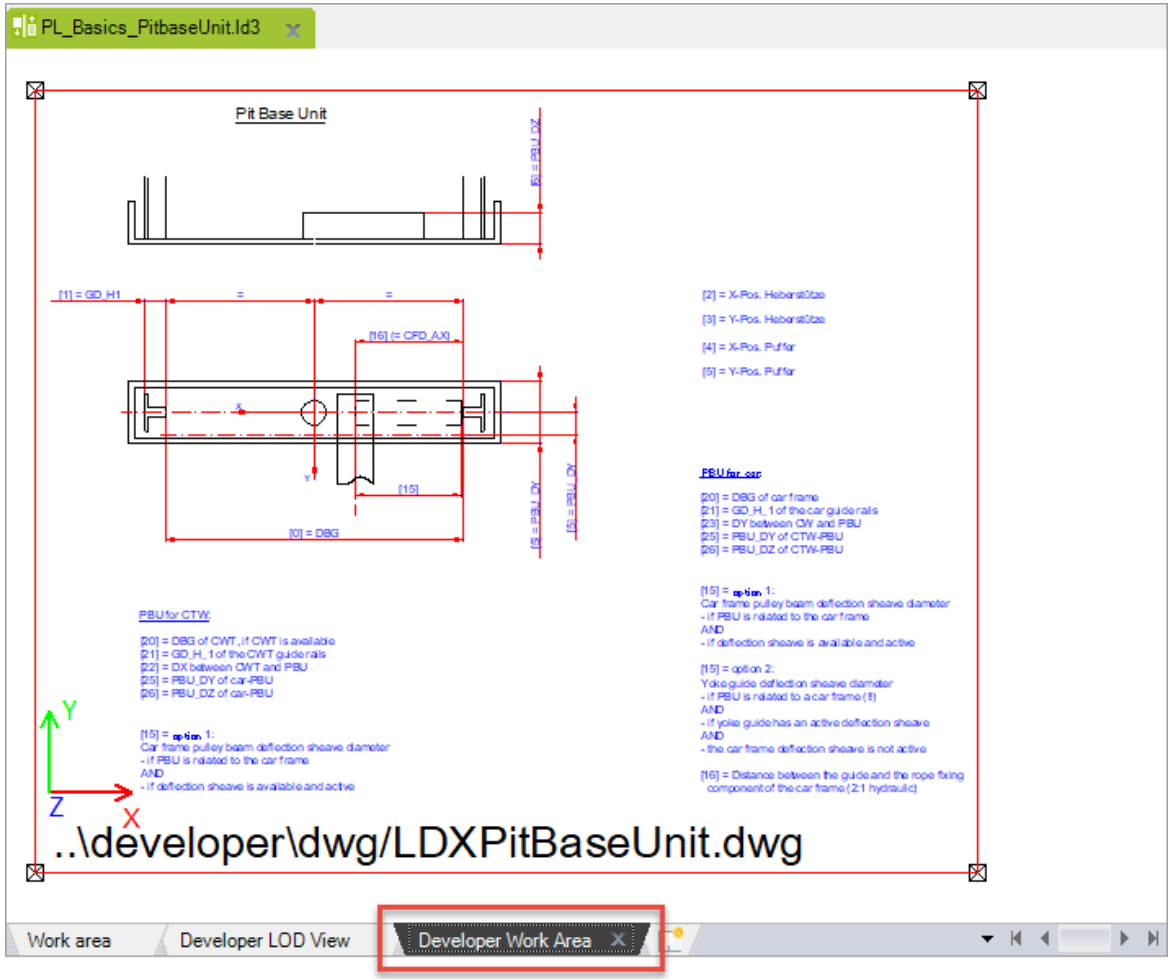
Use the loaded Explanation of Parameters and Values

- (C:\ProgramData\DigiPara\2018\dcc\DataPool\developer\dwg)
- The corresponding developer file (.dwg) with explanations about the BIM Component parameters is loaded automatically.



Modify the simplified 3D Geometry

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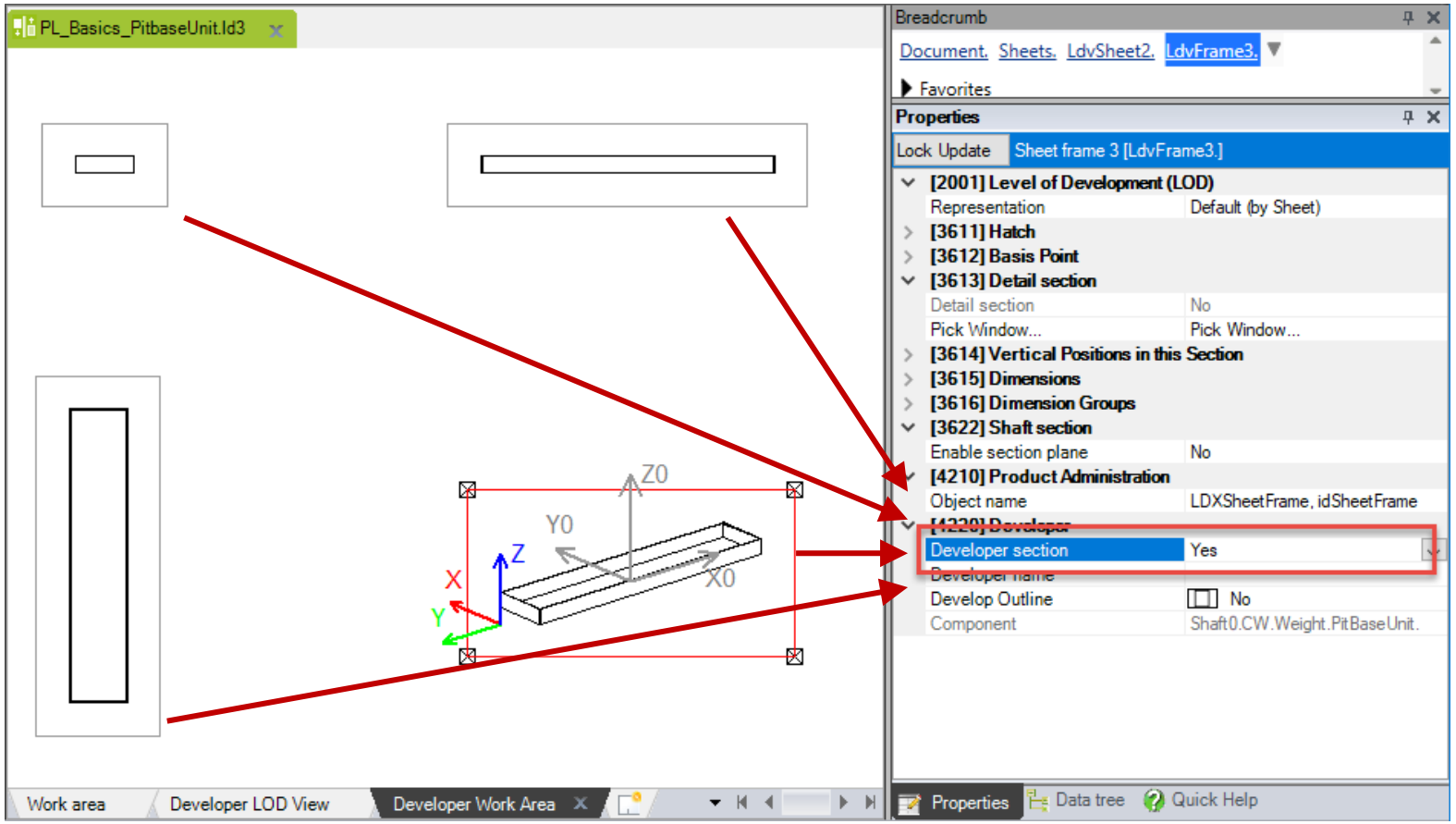
Developer sections provide the opportunity to select the profiles separately in the current view frame.

- in DigiPara Liftdesigner

The Developer Work Area includes predefined Developer View Frames.



Modify the simplified 3D Geometry

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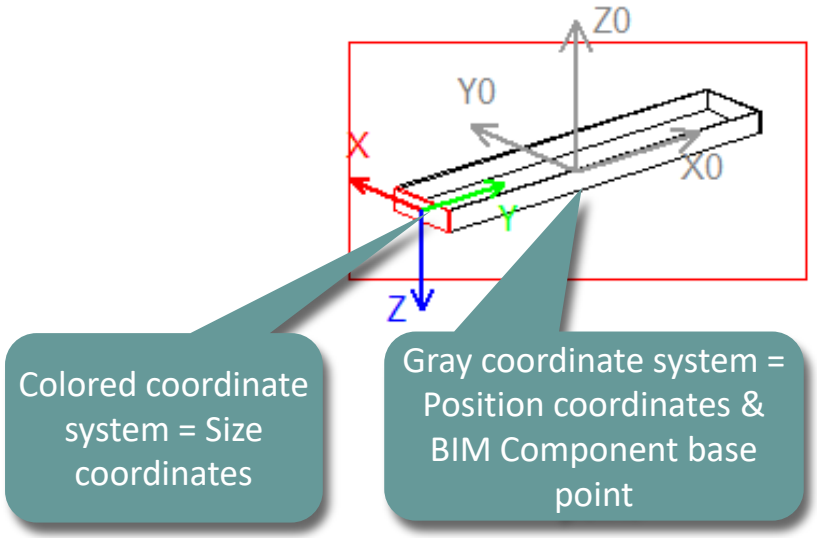
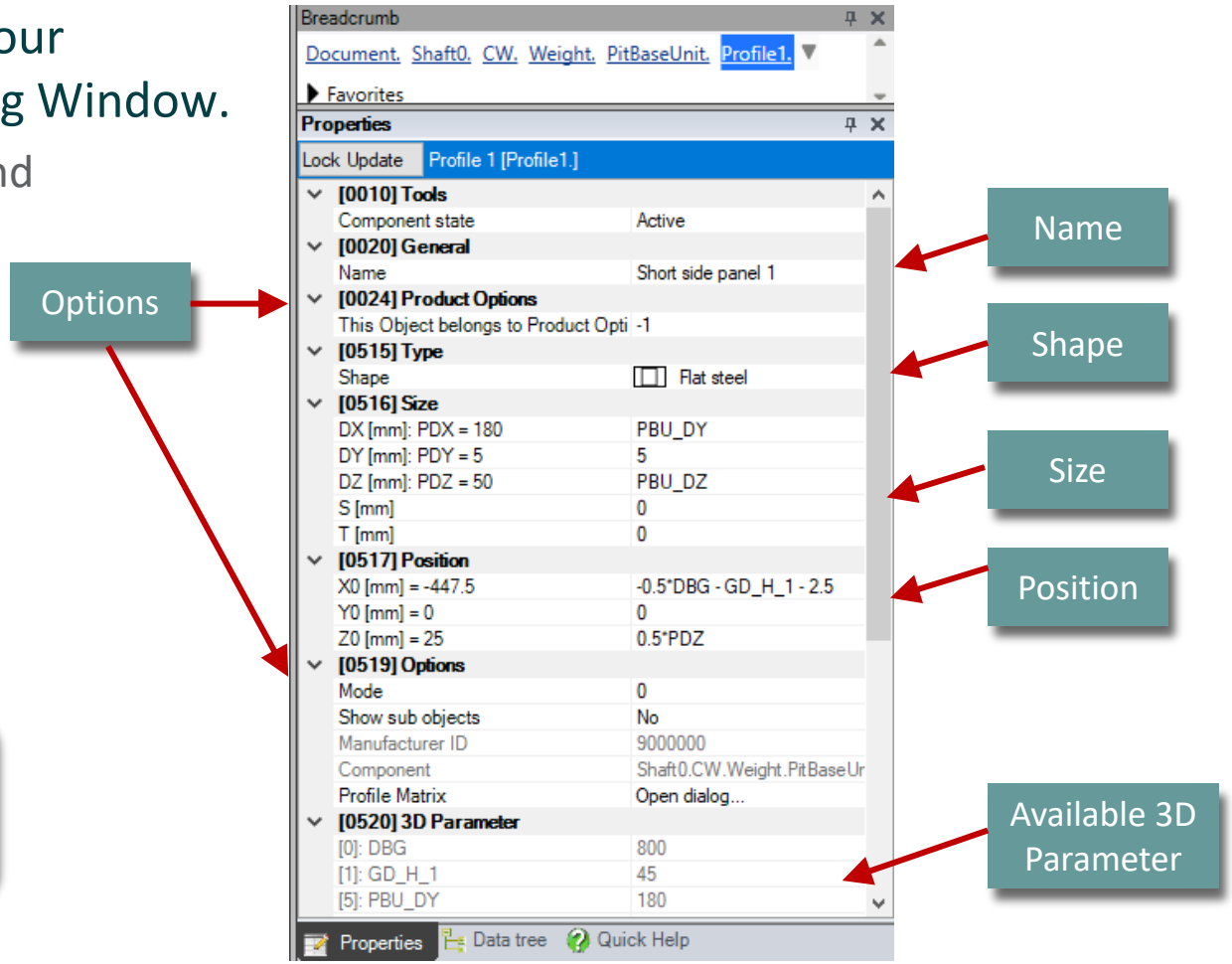
Define the size, position and options of your selected profile via the Properties Docking Window.

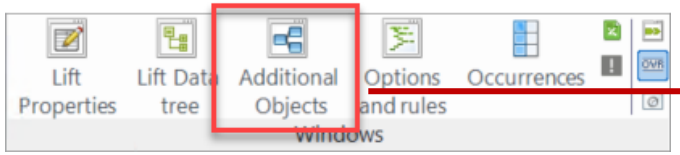
- Fill in own fix values, 3D Parameter or / and equations of both.

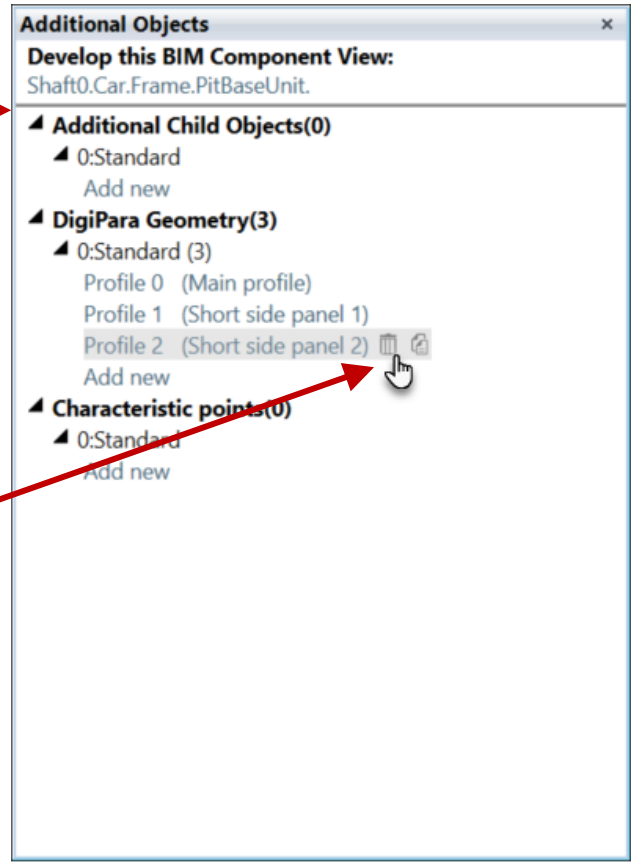




Modify the simplified 3D Geometry

Recommendation:





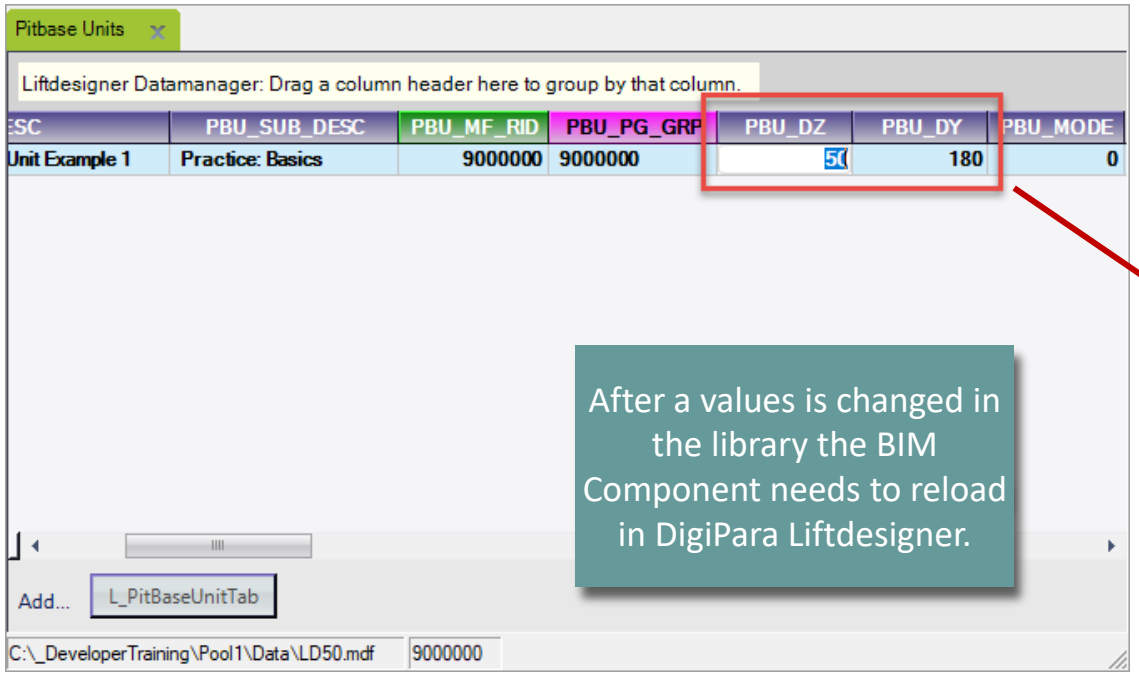
- Using the Additional Objects docking window in addition.
  - Listed overview about all aktiv or inactive objects (like profiles and points) the current component consists of.

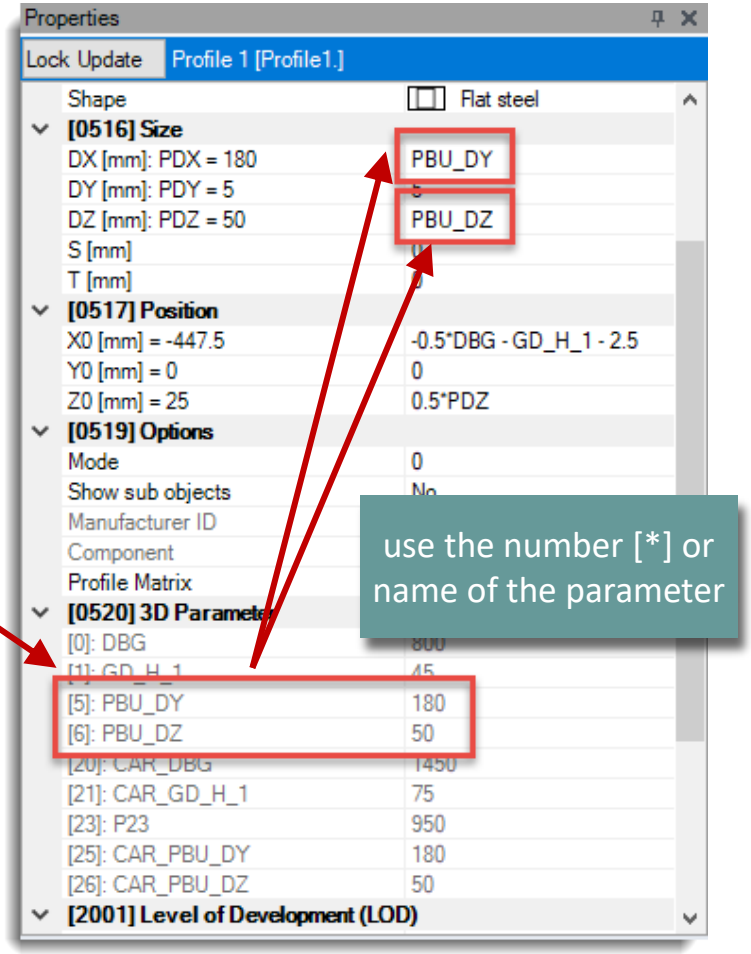
- The Additional Objects docking window allows you to copy or delete the selected objects
  - via crossing the element by mouse cursor

Modify the simplified 3D Geometry

The usable gray colored 3D Parameter are defined in the DigiPara BIM Library.

- Only editable via the DigiPara Liftdesigner Datamanager





Modify the simplified 3D Geometry

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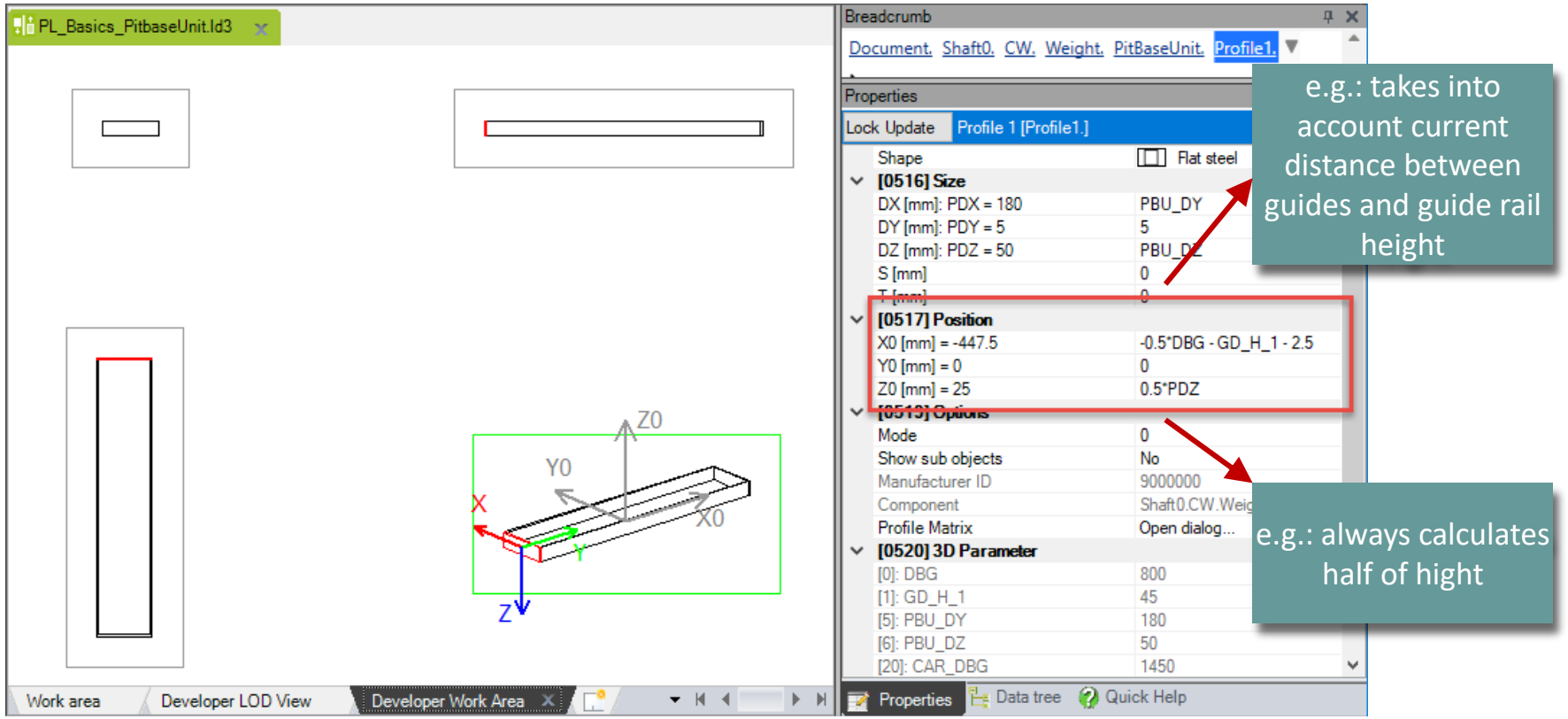
Using 3D Parameter and equations for the correct profile location is recommended …

- … for having the profile always on the right place, in the case the BIM Component size is changed.



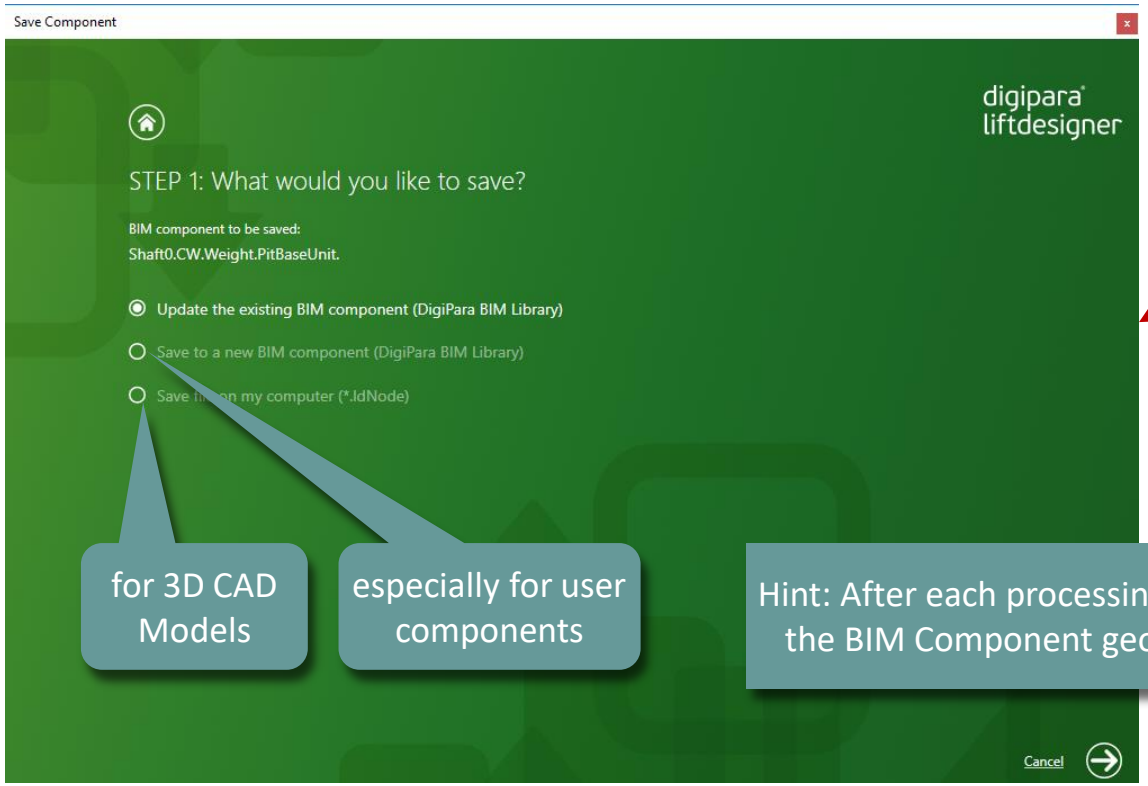
Save the BIM Component

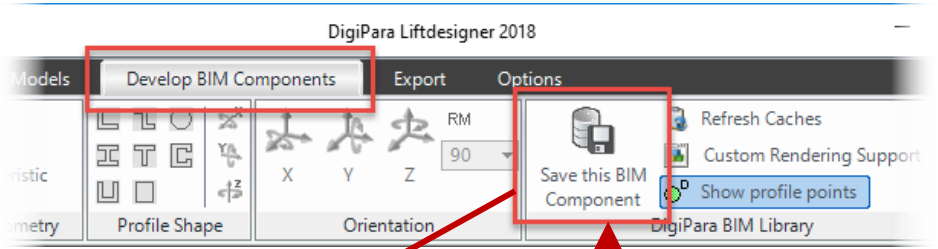
Save the BIM Component

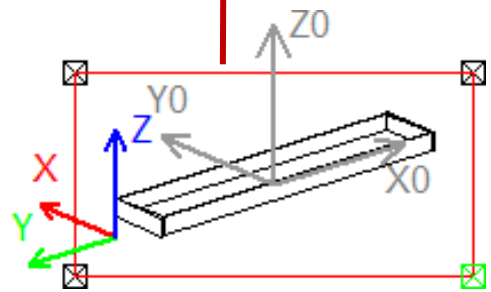
PL1.2 TYPICAL PROCESSES

Save this BIM Component back into …

- … the DigiPara BIM Library







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PL1.3

Optional Steps

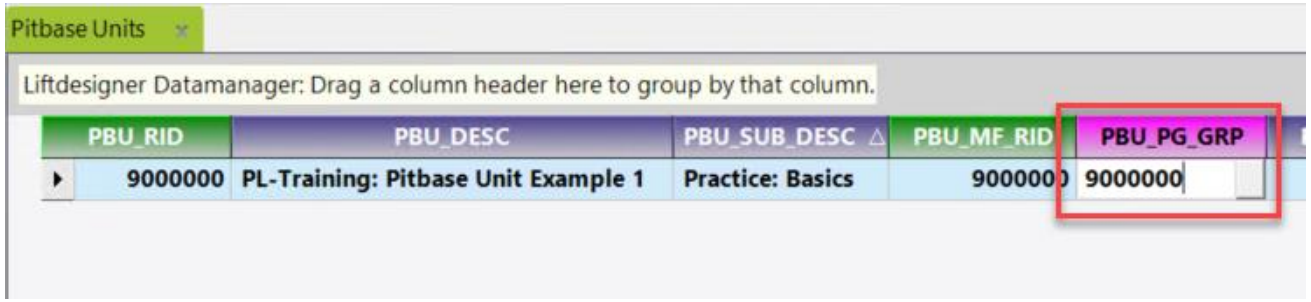
Simple Pit Base Unit

General Information

PL1.3 OPTIONAL STEPS

Product options and dynamic properties for the component are created in the associated profile group in DigiPara Liftdesigner Datamanager.

- The database table of the profile group of each component can be accessed via the pink column ***_PG_GRP**.
  - Every profile group has it's own designation number:



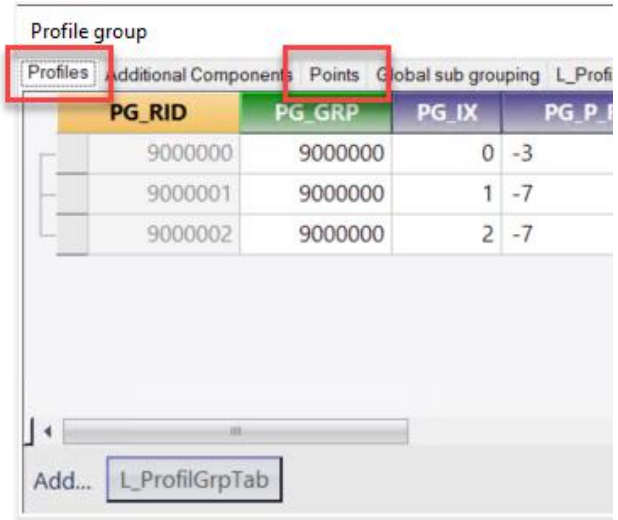
What is a Profile group?

- A profile group is an addition to the meta data for the user defined dimensions and settings.
- The user defined profile group objects of an existing component can be summarized in a profile group. Like profiles, points, Additional components, ...
- An existing profile group can be copied with all it's parameters, values and additional options.

Basic content of a profile group

- **Profile** types for the geometrie definition of the component
  - Size parameters
  - Position parameters
  - Additional Options for representation in drawings

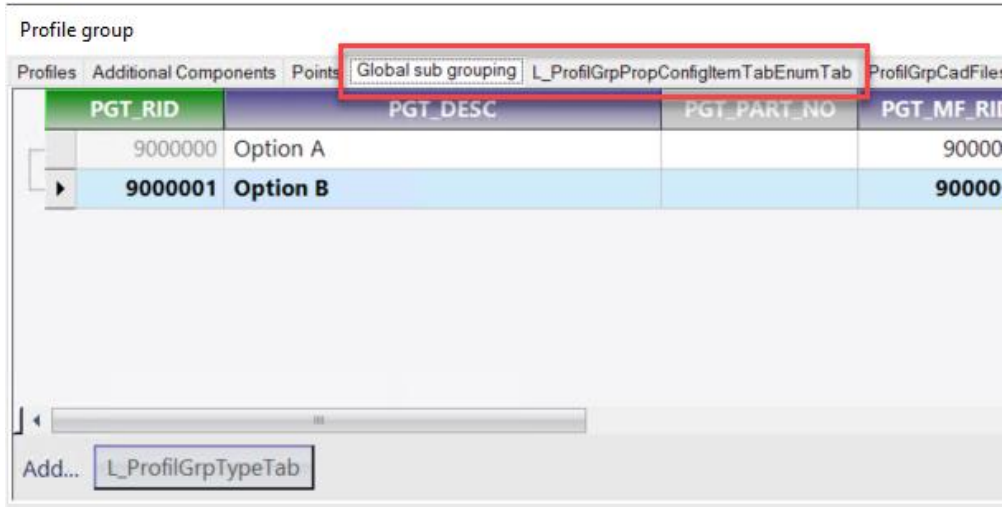
- **Points** for profile outlines, for position assignment of related components or for additional dimensions
  - Position parameters
  - Assignment group point codes



Basic content of a profile group

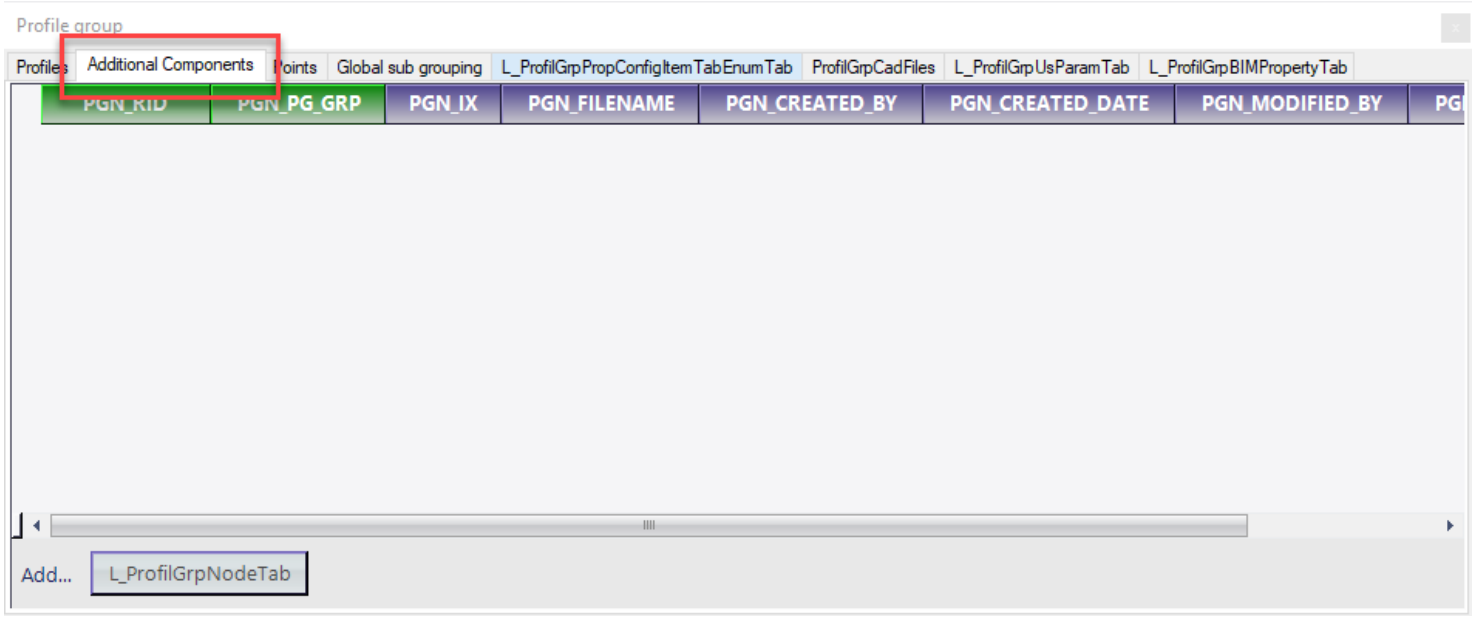
- **Global sub grouping** of profiles and/or points for product options in DigiPara Liftdesigner
  - descriptions
  - Additional options for representation in drawings

- **Dynamic properties** which provides the opportunity to change the component dimensions the DigiPara Liftdesigner
  - Assignment parameters
  - Additional component options for representation and settings in existing projects



Basic content of a profile group

- **Additional components** to extend the DigiPara Liftdesigner geometry with e.g. 3D CAD models.
  - More detailed explanations are included in the corresponding training module for Product Loading with CAD models.



CAD Models for Product Loading

PL3

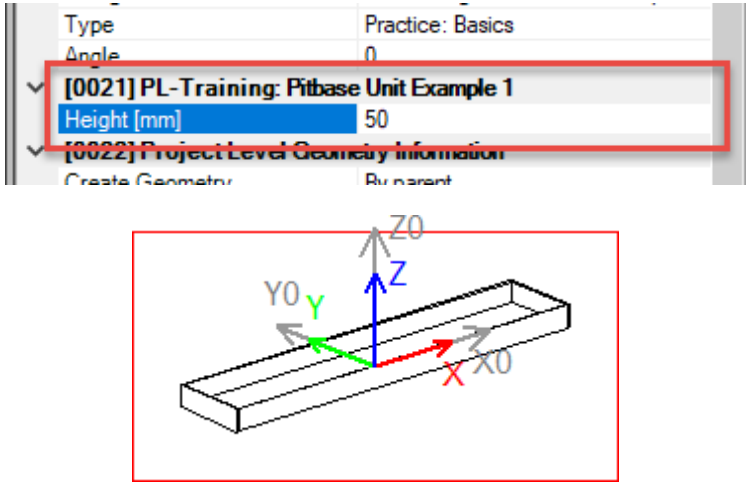
Dynamic Properties - Example 1

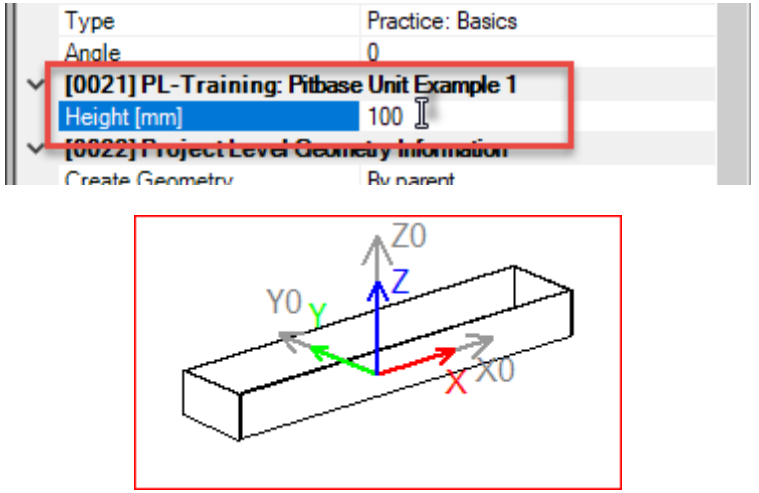
Dynamic Properties - Example 1

PL1.3 OPTIONAL STEPS

Expected result:

- Direct input of any value





- Dynamic properties
  - are specific properties which will be displayed in DigiPara Liftdesigner only for the current component
  - allows you to change dimensions e.g. the height of a profile in your project

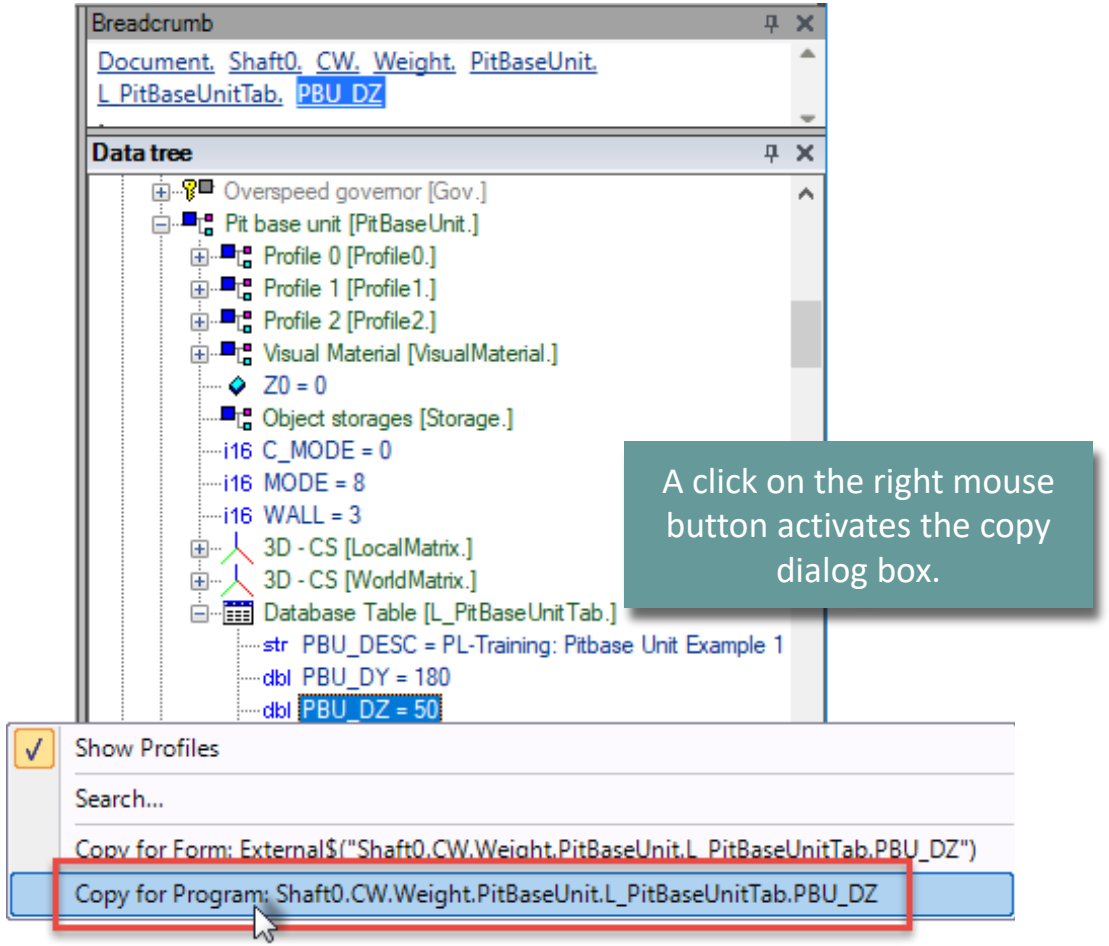
Dynamic Properties - Example 1

PL1.3 OPTIONAL STEPS

Copy a reference / 3D parameter of your new BIM Component

- from the DigiPara Liftdesigner Data tree → Database Table

- Copy for Program

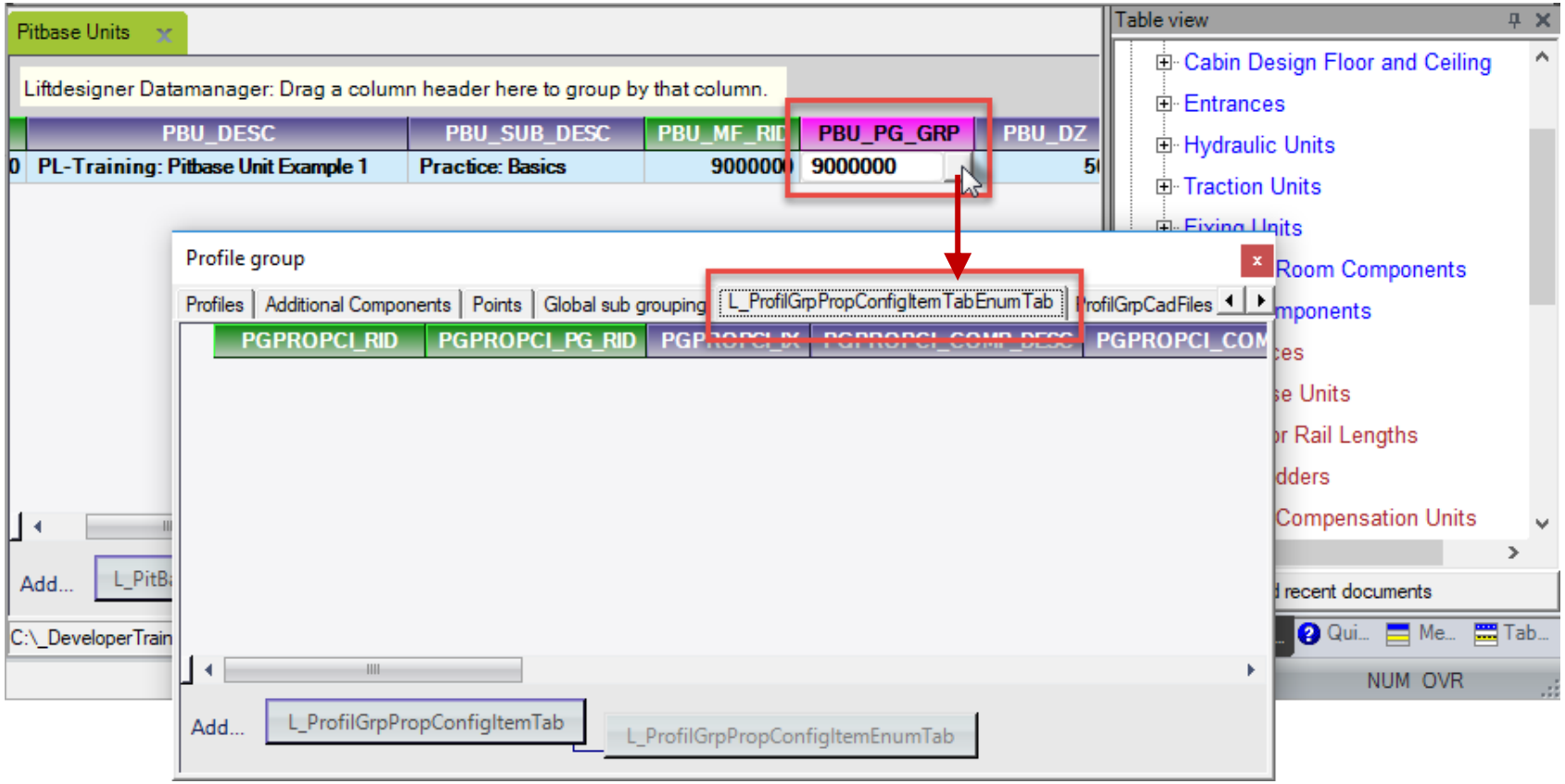


Dynamic Properties - Example 1

PL1.3 OPTIONAL STEPS

Create a dynamic property using the associated Profile group table

- in DigiPara Liftdesigner Datamanager



Dynamic Properties - Example 1

PL1.3 OPTIONAL STEPS

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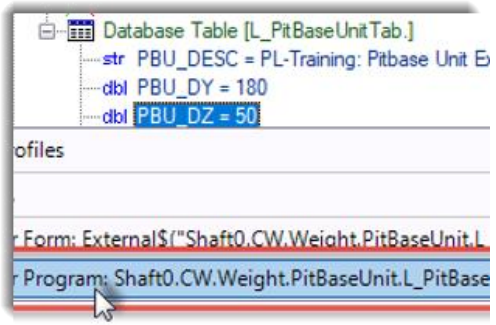
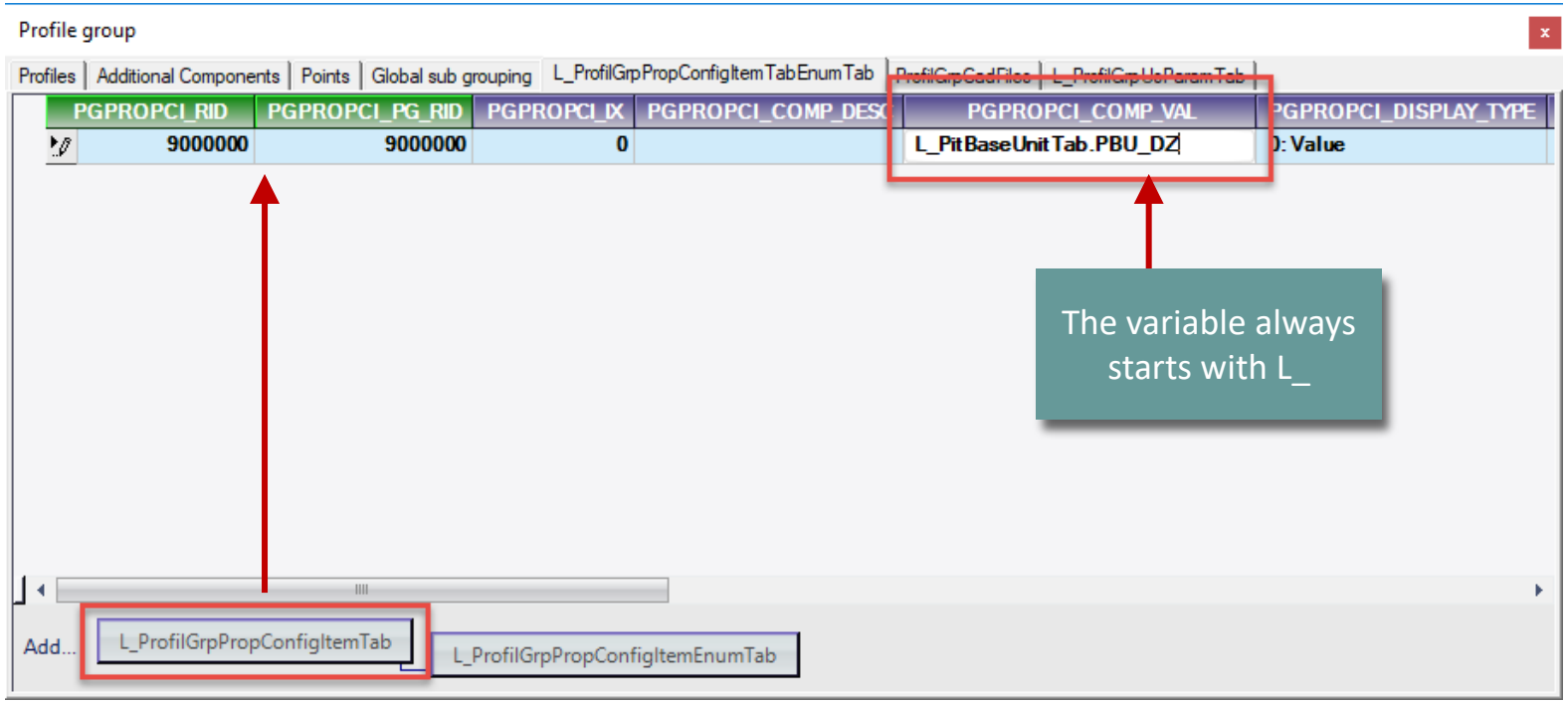
Add a new record and paste (Ctrl. V) the DigiPara Liftdesigner reference / 3D Parameter into the corresponding column.



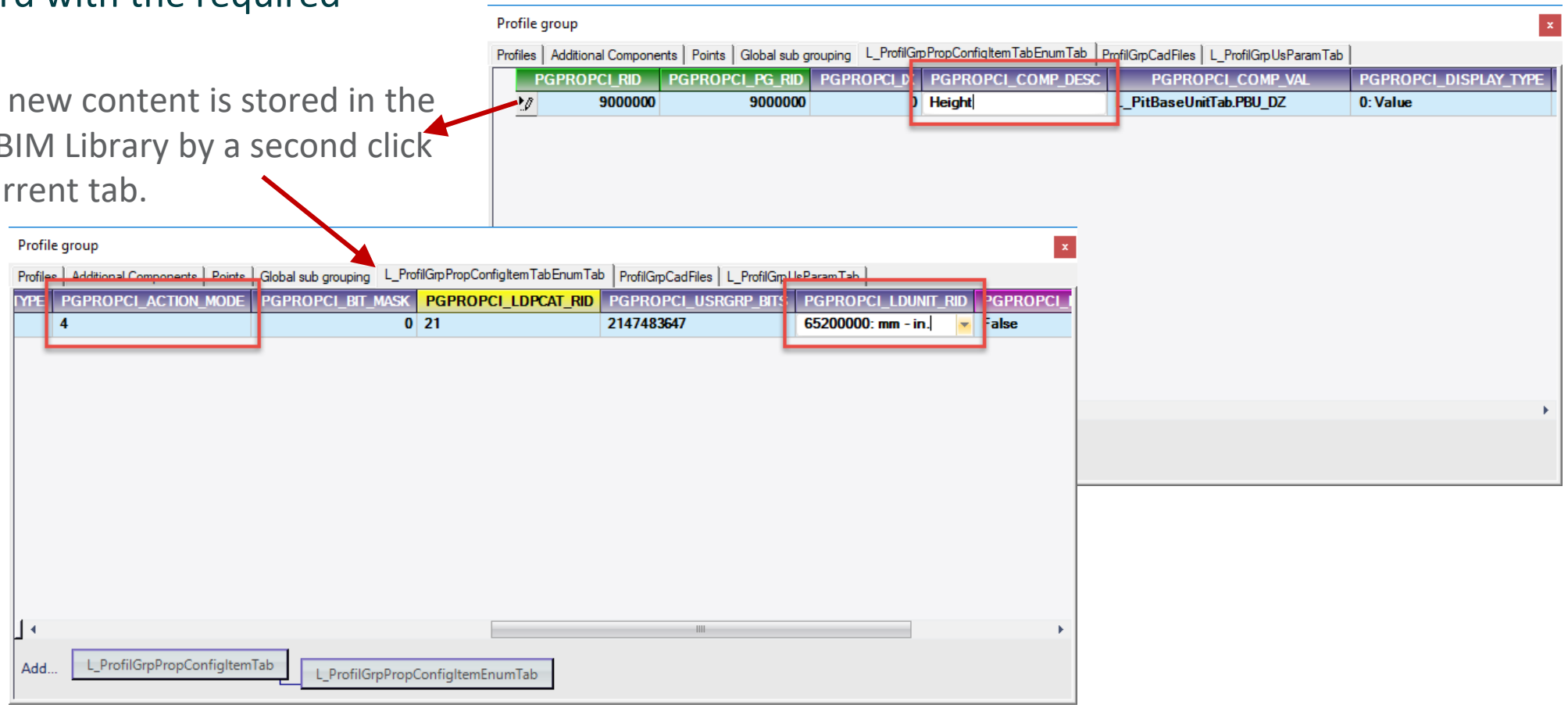


Dynamic Properties - Example 1

PL1.3 OPTIONAL STEPS

Fill the record with the required information

- Hint: The new content is stored in the DigiPara BIM Library by a second click on the current tab.

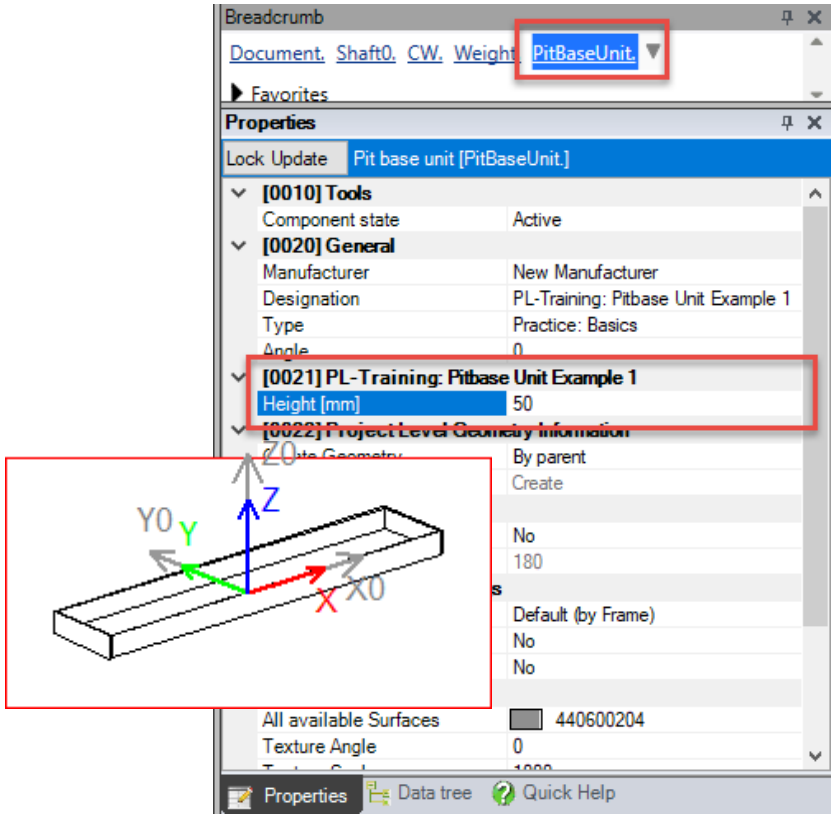


Dynamic Properties - Example 1

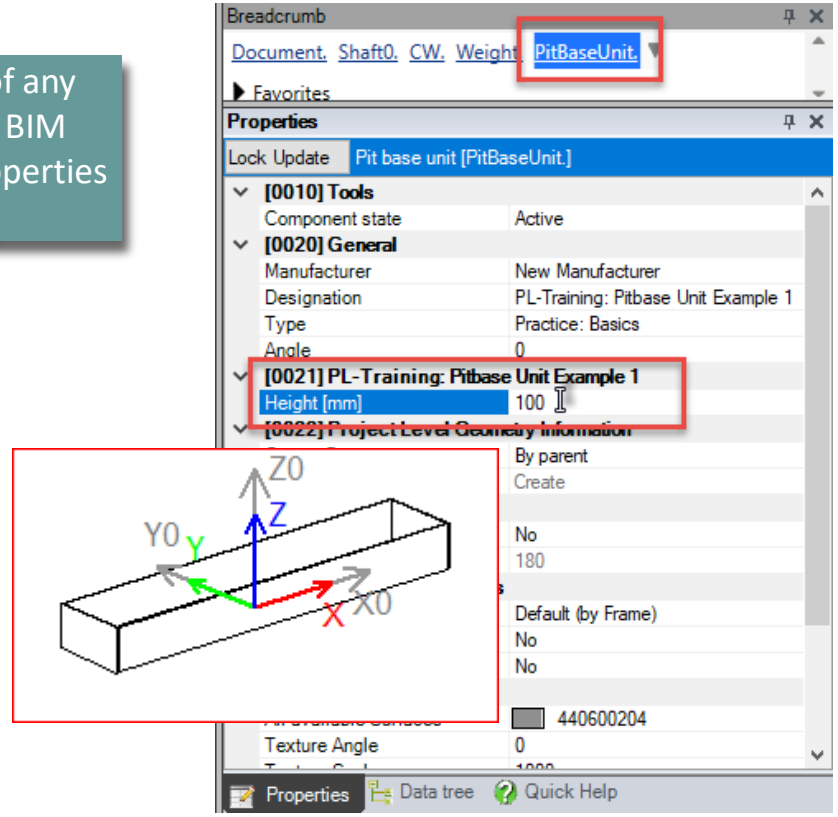
PL1.3 OPTIONAL STEPS

Testing the new dynamic property of your BIM Component

- in DigiPara Liftdesigner



Direct input of any values in the BIM Component properties window



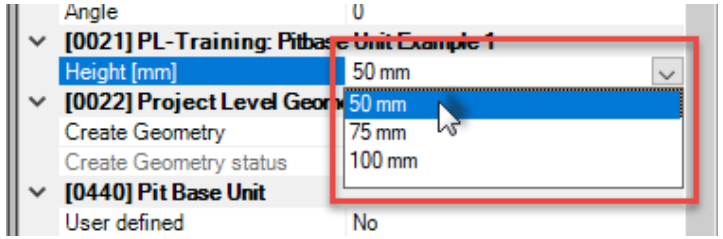
Dynamic Properties - Example 2

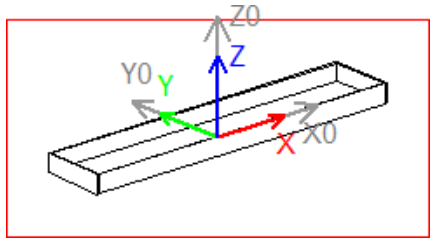
Dynamic Properties - Example 2

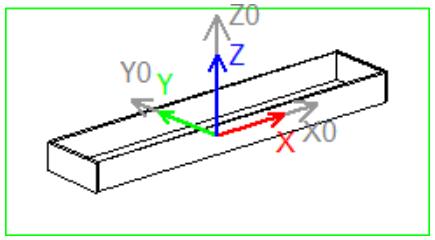
PL1.3 OPTIONAL STEPS

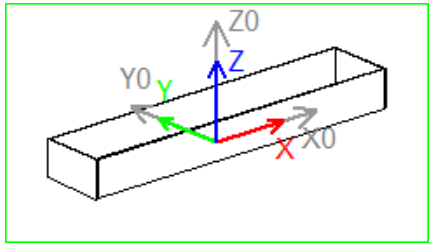
Expected result:

- Choice of different values from list









Dynamic Properties - Example 2

PL1.3 OPTIONAL STEPS

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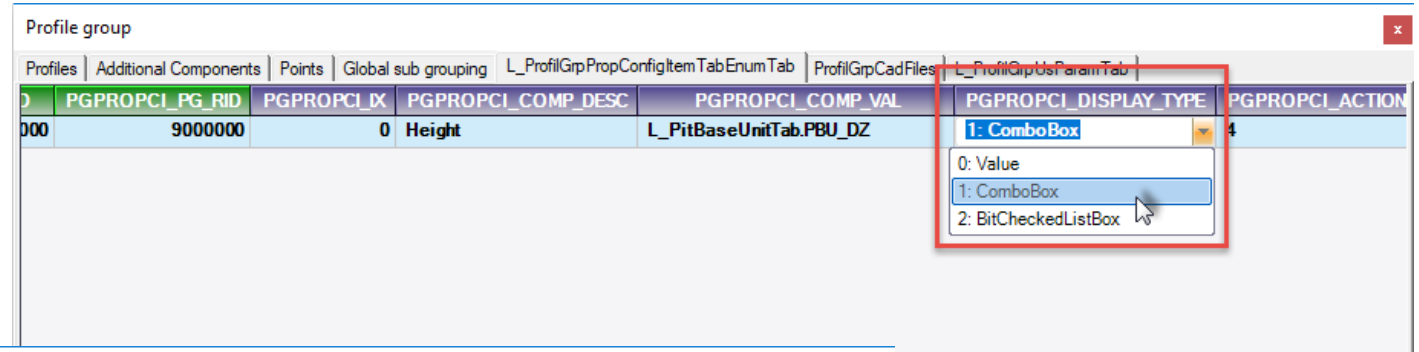
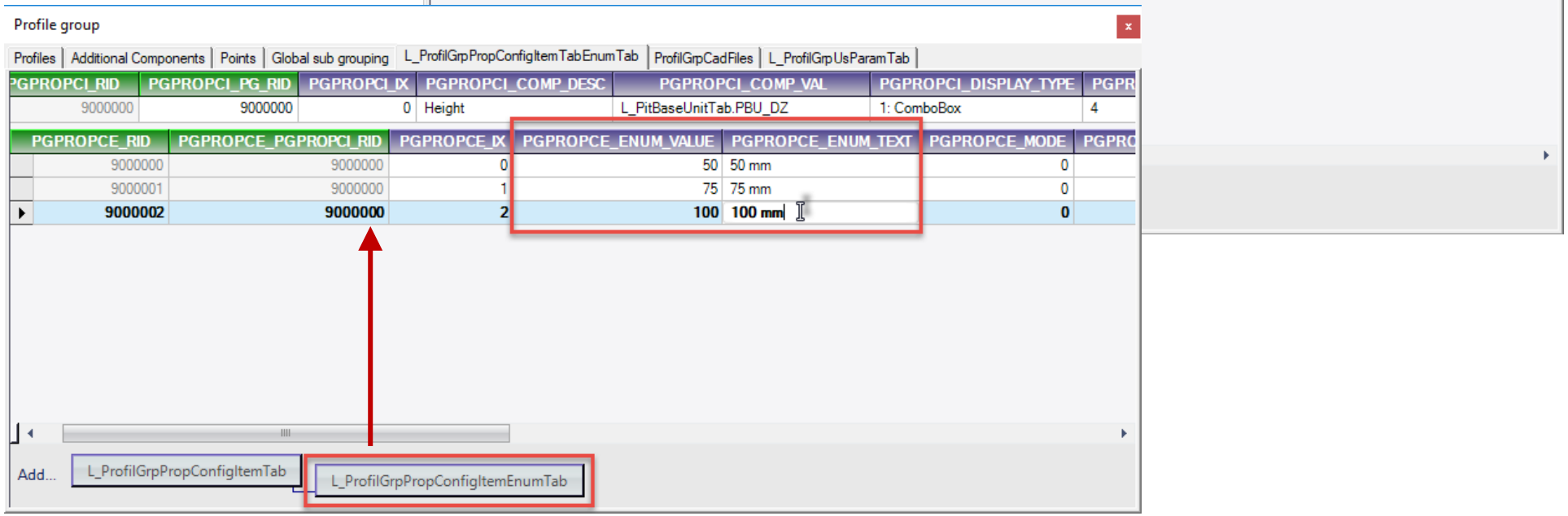
Create a dynamic property to switch between own defined values in the DigiPara Liftdesigner Properties Window

- using a ComboBox in DigiPara Liftdesigner Datamanager



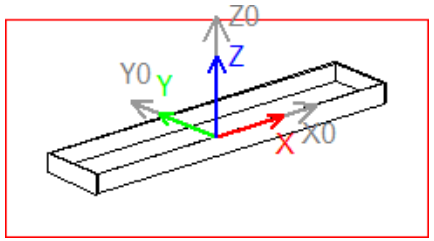


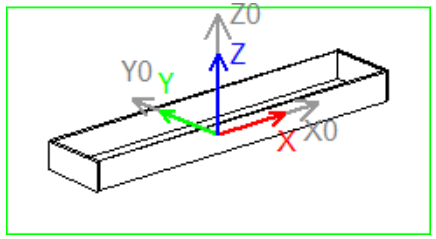
Dynamic Properties - Example 2

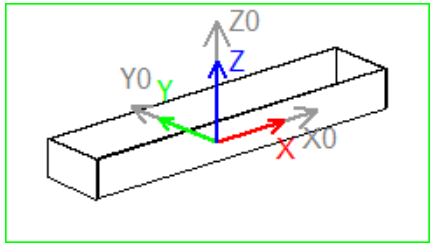
PL1.3 OPTIONAL STEPS

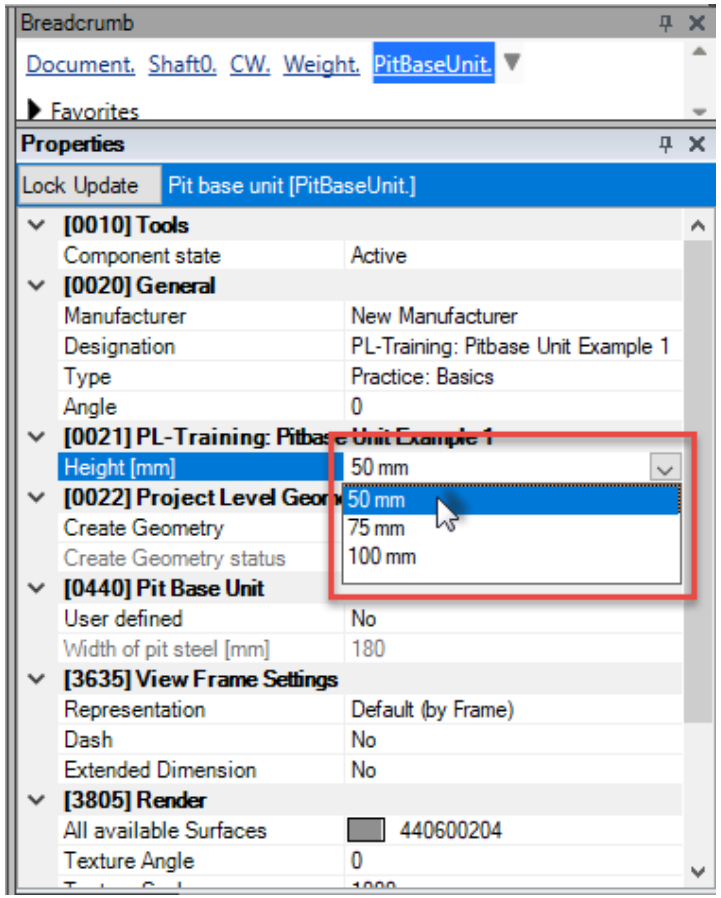
Testing the edited dynamic property of your BIM Component

- in DigiPara Liftdesigner









Product Options / Sub Grouping

Product Options / Sub Grouping

PL1.3 OPTIONAL STEPS

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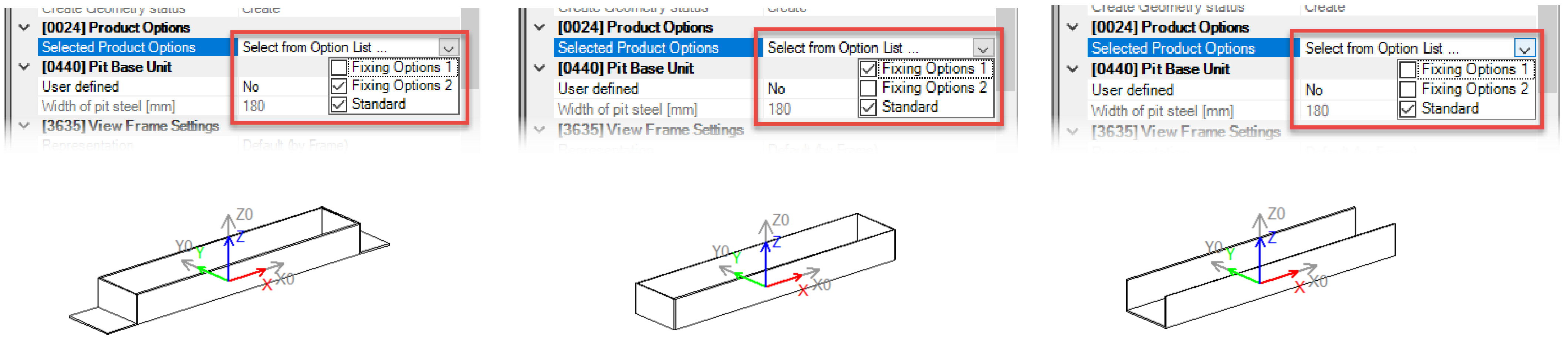
Expected result:

- Choice of different product options



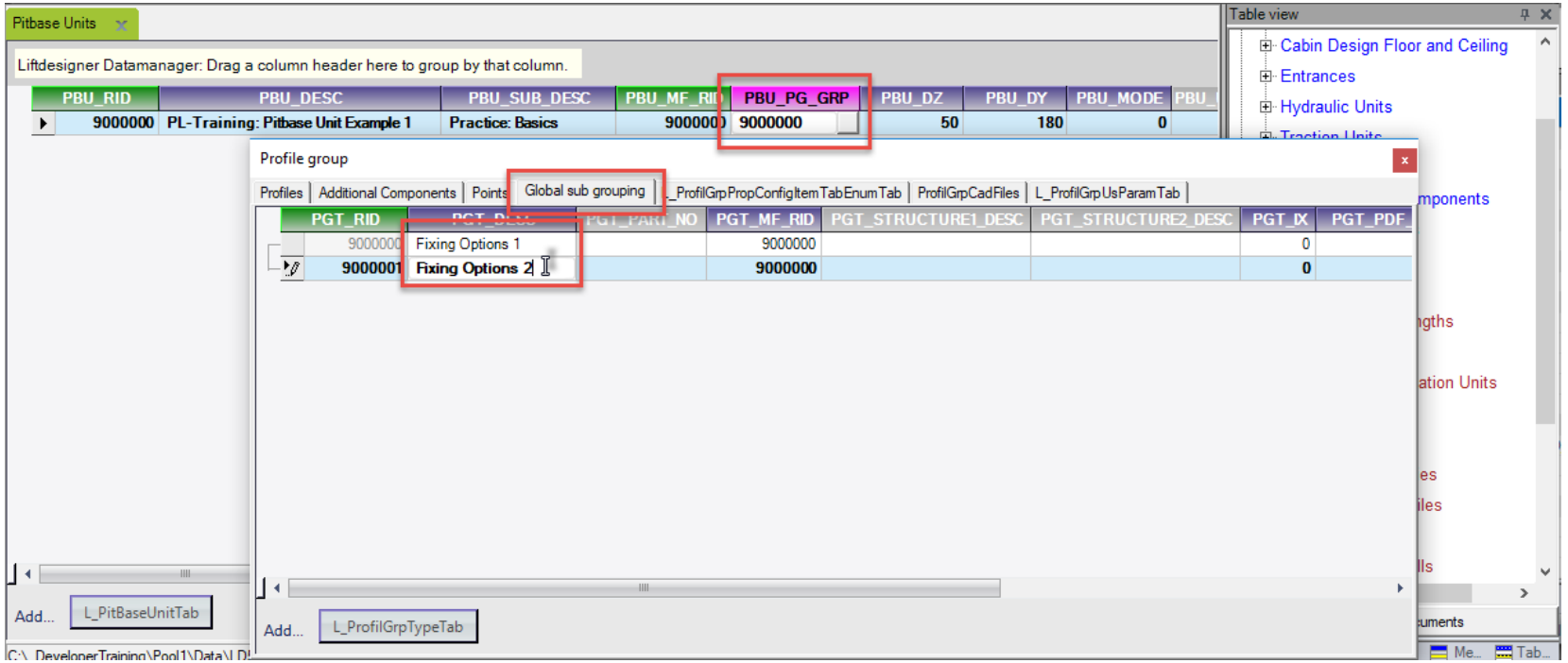
- Product Options
  - can be switched on and off, if required, in Liftdesigner by adding or removing the corresponding check mark
  - are selectable in 2 different Liftdesigner docking windows: under Properties or Options and rules

Product Options / Sub Grouping

PL1.3 OPTIONAL STEPS

Prepare new Product Options

- in DigiPara Liftdesigner Datamanager → Profile group



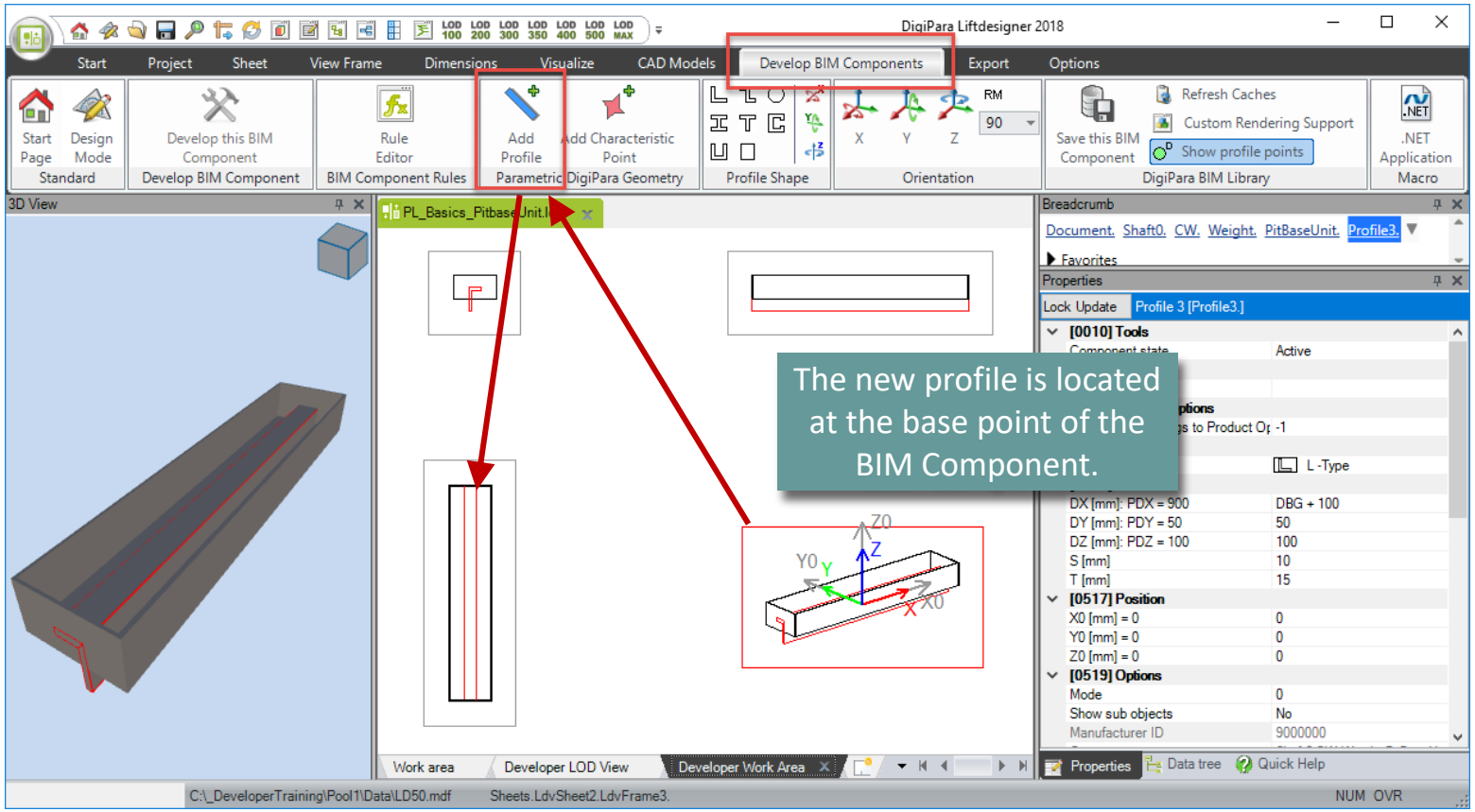
Product Options / Sub Grouping

PL1.3 OPTIONAL STEPS

digipara® liftdesigner

Add a new profile in DigiPara Liftdesigner to your BIM Component

- in DigiPara Liftdesigner (Developer Work Area)

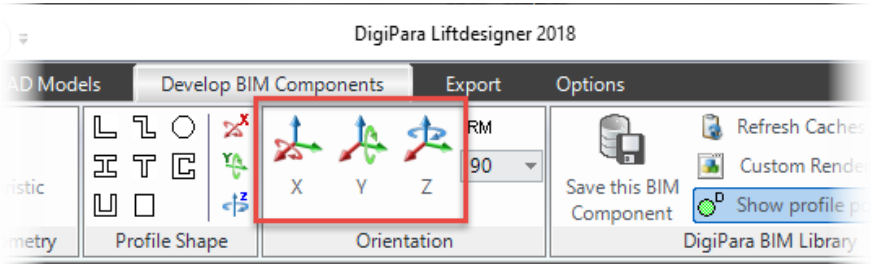


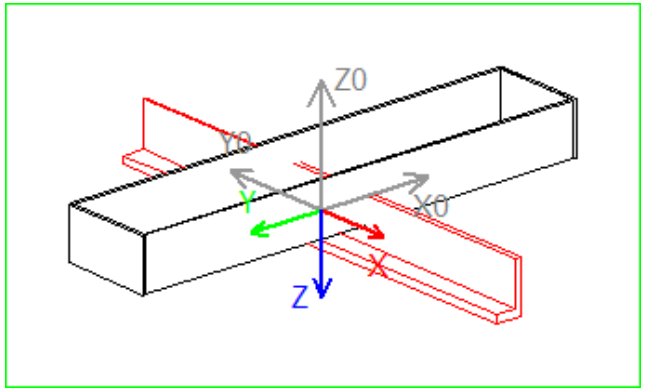
Product Options / Sub Grouping

PL1.3 OPTIONAL STEPS

Rotate the new profile using X, Y and Z coordinates

- in DigiPara Liftdesigner





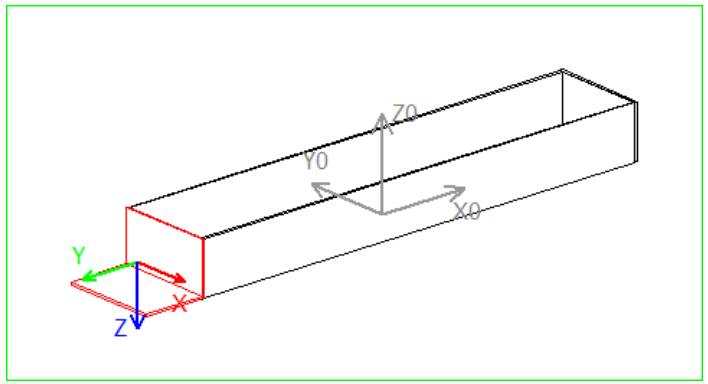
Product Options / Sub Grouping

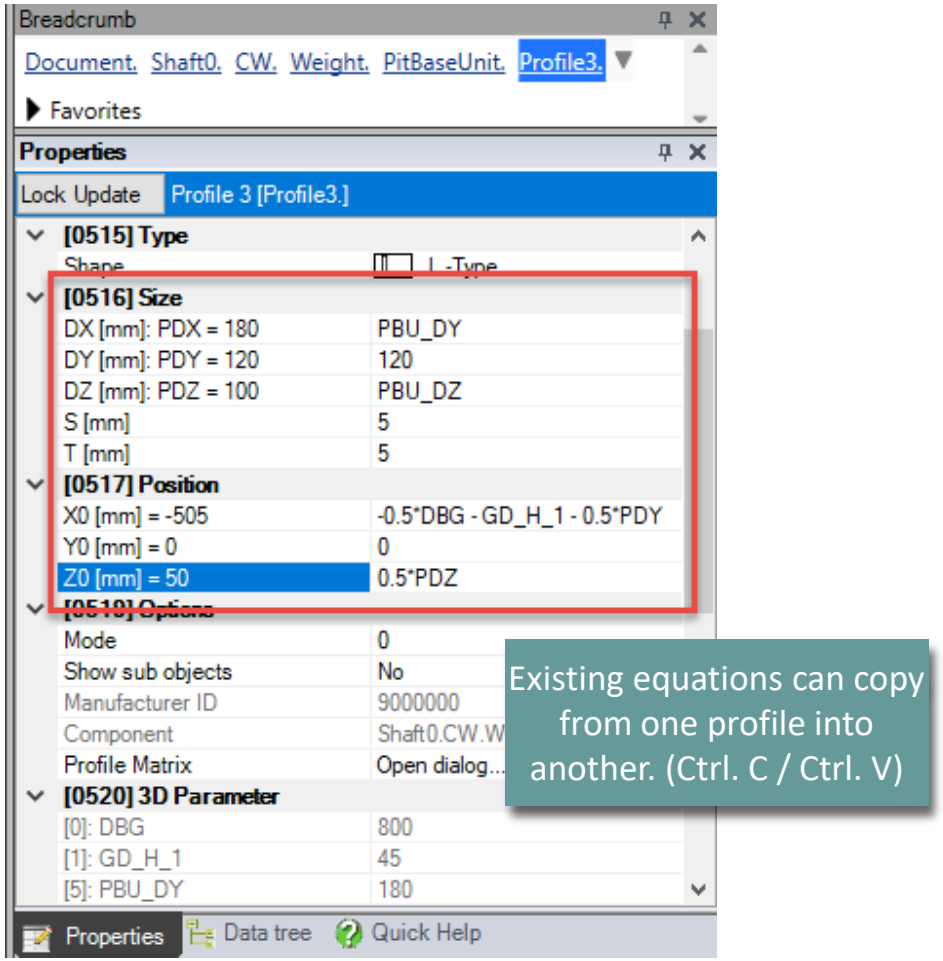
PL1.3 OPTIONAL STEPS

digipara® liftdesigner

Define the size and correct position using 3D Parameters and equations

- via the profile Properties Window in DigiPara Liftdesigner





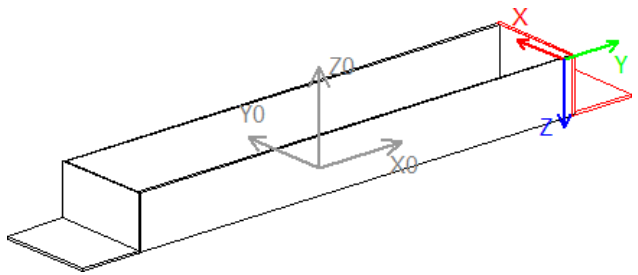
Product Options / Sub Grouping

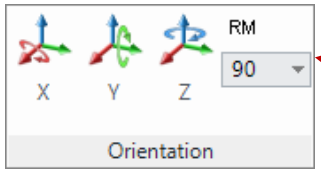
PL1.3 OPTIONAL STEPS

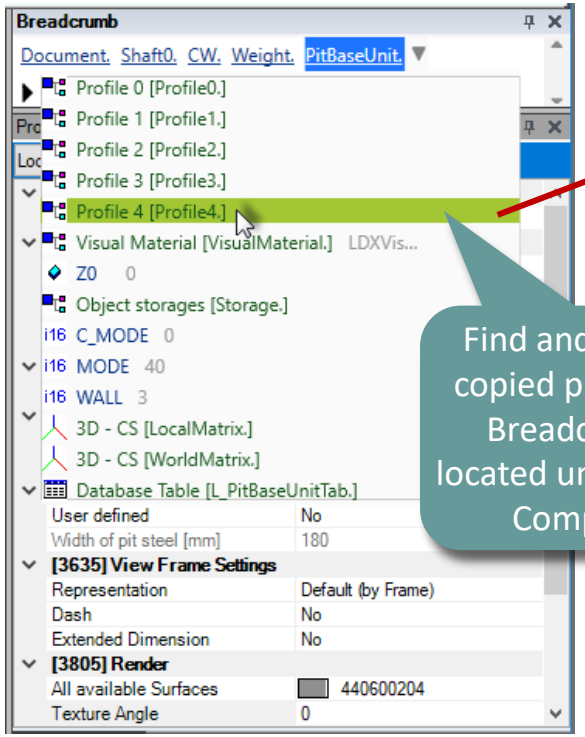
digipara® liftdesigner

Copy the finished defined profile and define the opposite position by changing only the signs (+ / -)

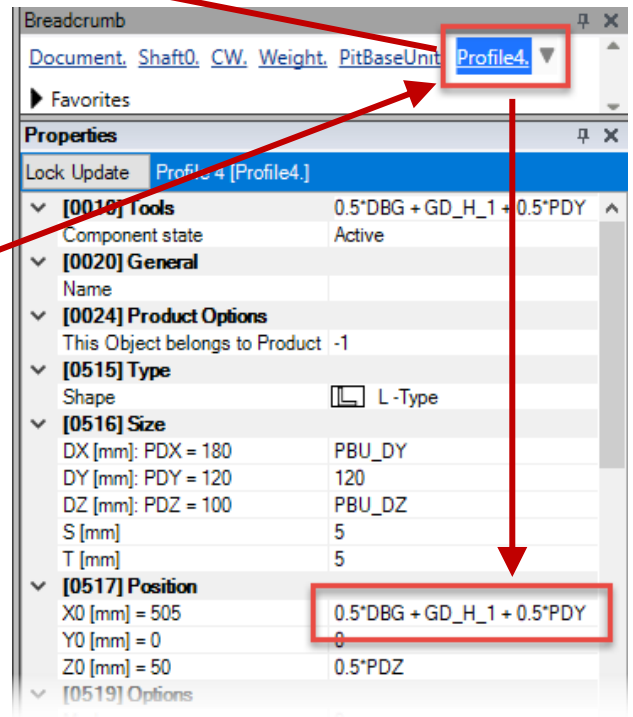
- Select the existing profile and press Ctrl. C / Ctrl. V
- Change the signs
- Rotate the copied profile







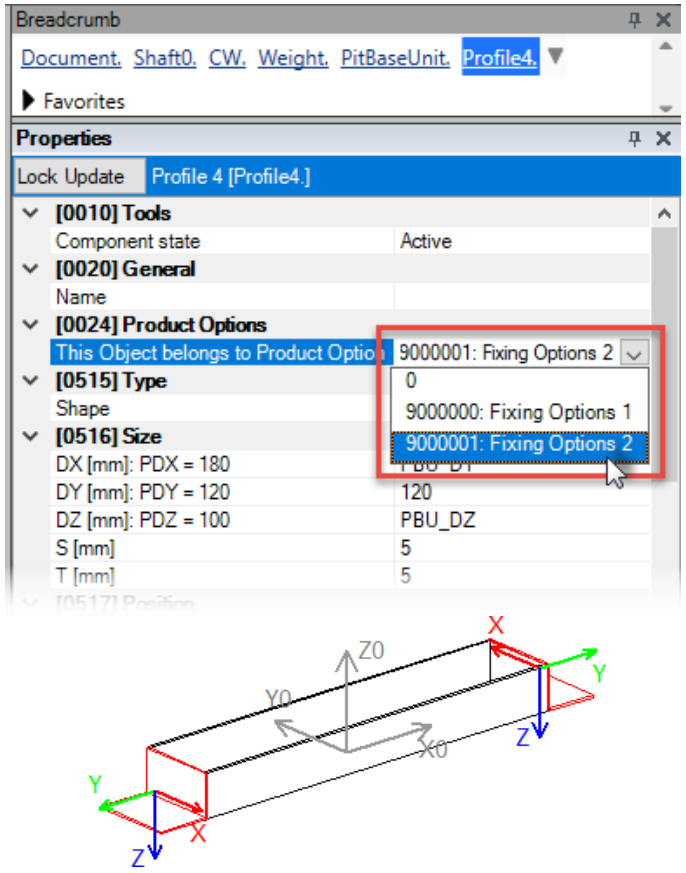
Find and select the copied profile in the Breadcrumb list located under the BIM Component.

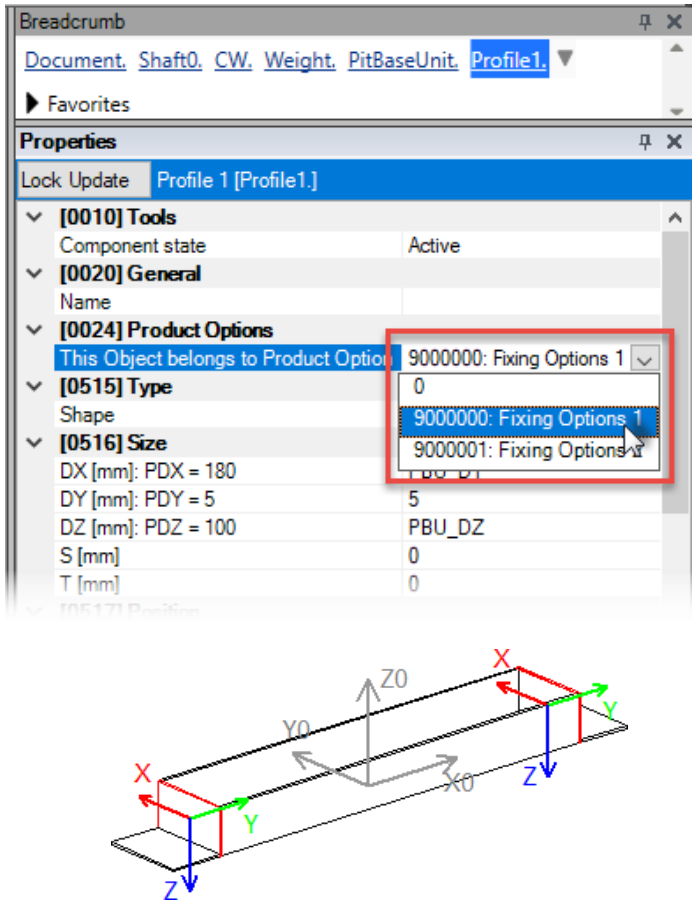


Product Options / Sub Grouping

PL1.3 OPTIONAL STEPS

Assign profiles to the prepared BIM Component Product Options

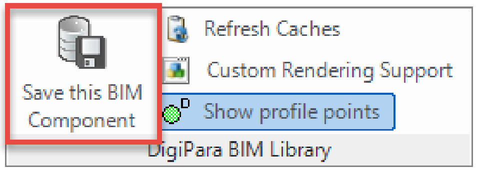


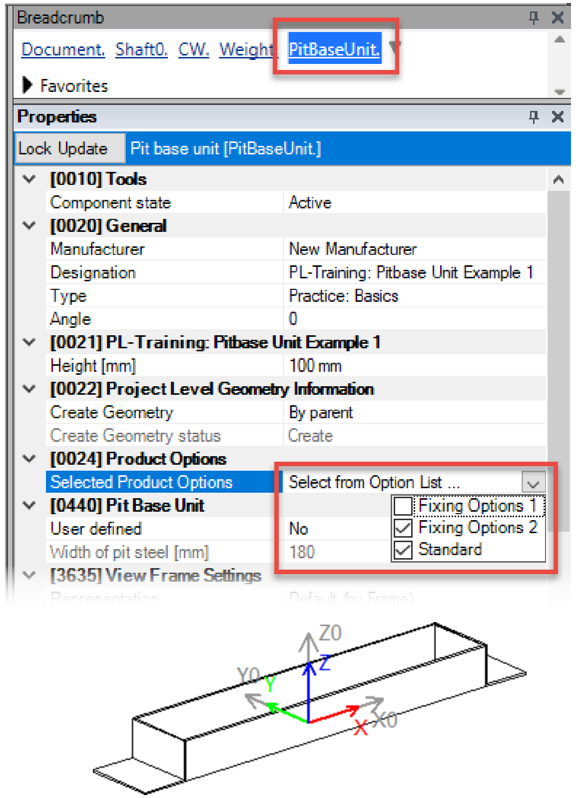


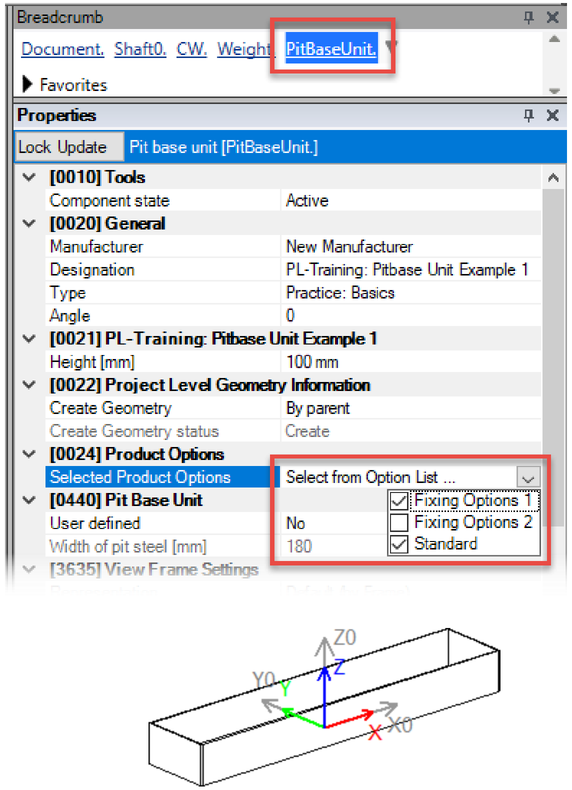
Product Options / Sub Grouping

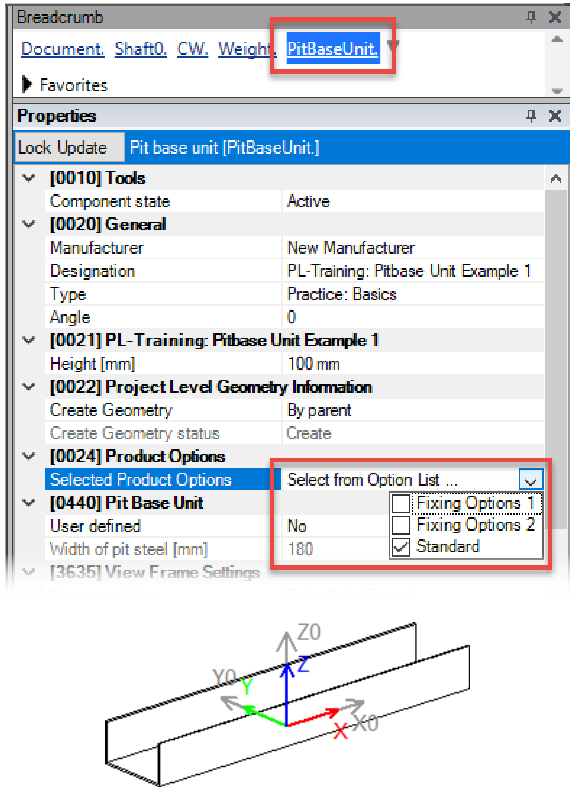
PL1.3 OPTIONAL STEPS

Testing the new Product Options after saving this BIM Component back into the DigiPara BIM Library





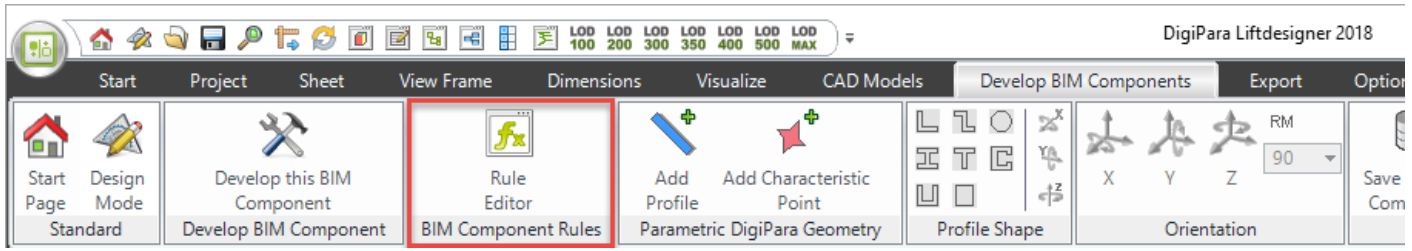




BIM Component Rules

Define own component rules via the Rule Editor in Liftdesigner

- Add additional logic



- Dynamic rules make sense for the following cases:
  - add logic that is related to the corresponding component
  - typical cases are: check minimum / maximum values of the component

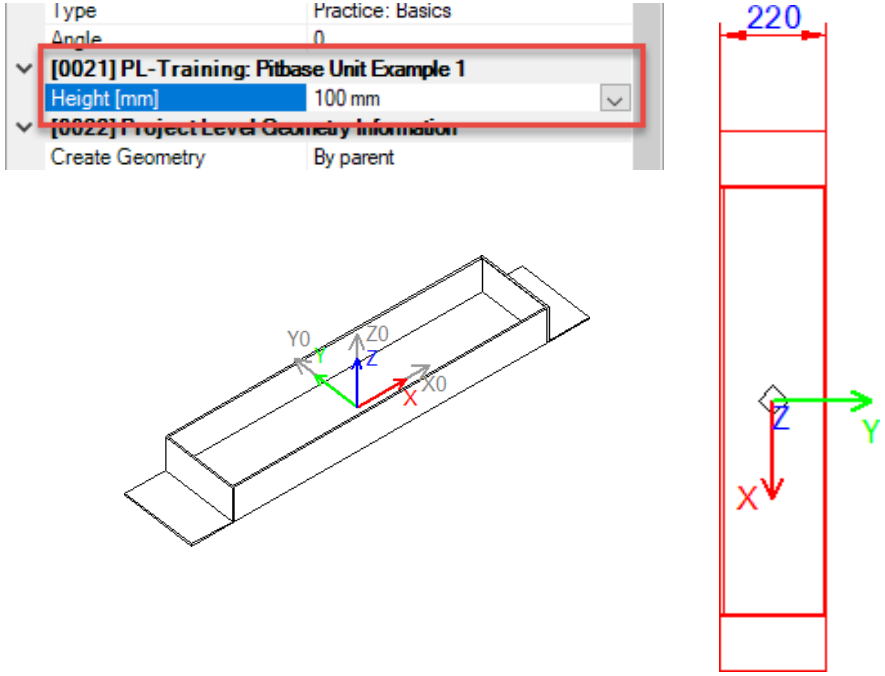
- Dynamic rules are stored to the profile group of a component
  - it is not recommended to use rules that apply the whole elevator system.
    Typical no-gos are: changing dimensions of components that are in the same or higher level of the data tree hierarchy

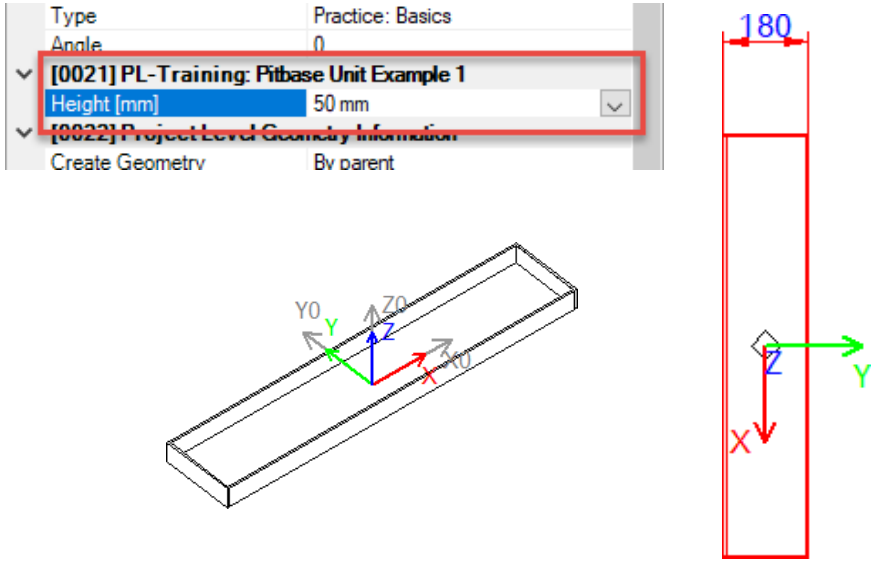
BIM Component Rules

PL1.3 OPTIONAL STEPS

Expected result:

- Dynamic components through stored rules



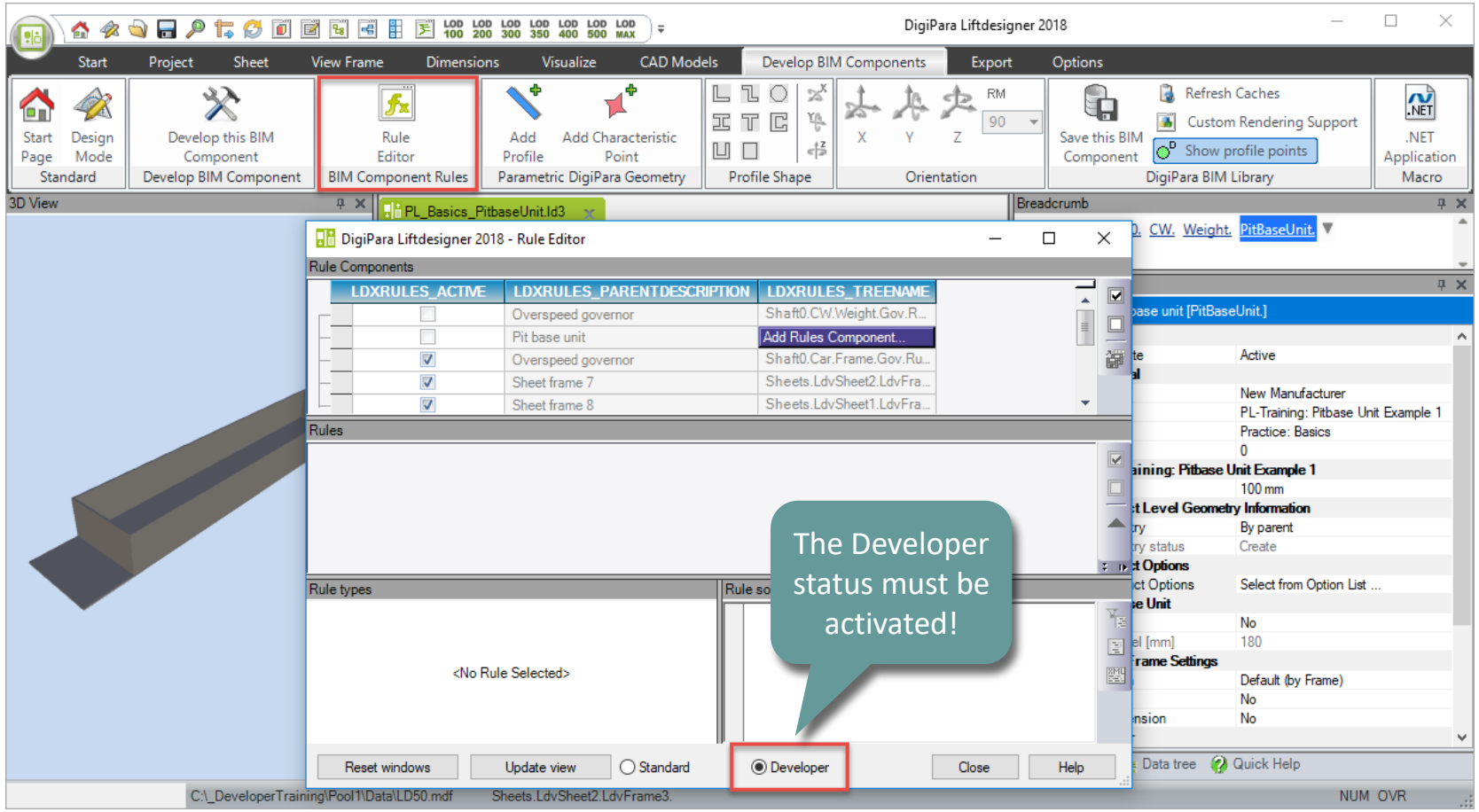


BIM Component Rules

PL1.3 OPTIONAL STEPS

Select your BIM Component and open the Rule Editor

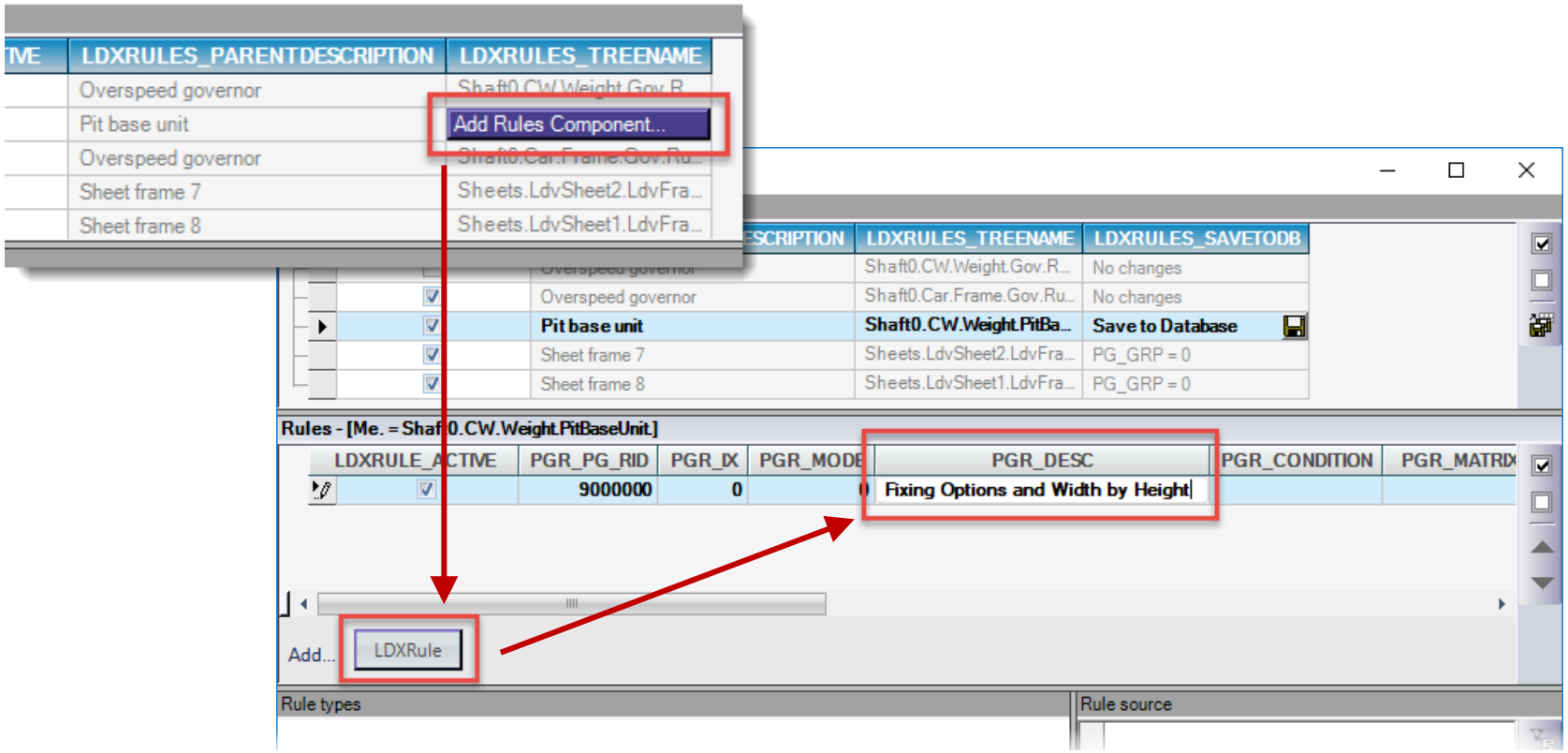
- in DigiPara Liftdesigner



BIM Component Rules

PL1.3 OPTIONAL STEPS

Add a new Rule to your BIM Component and fill in a unique description → Add Rules Component → Add … LDXRule

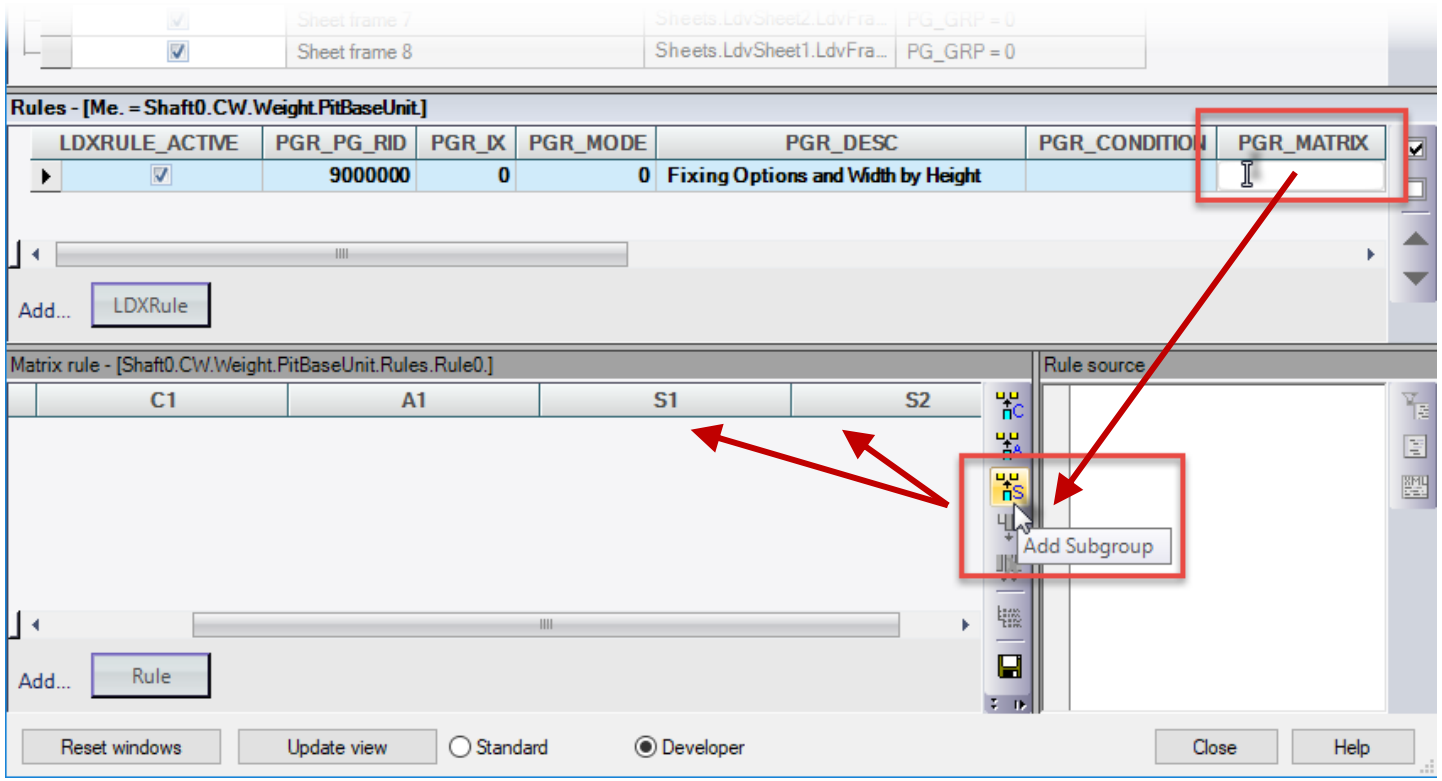


BIM Component Rules

PL1.3 OPTIONAL STEPS

Add Subgroup (S1, S2) columns additionally to the existing Condition (C1) and Assignment (A1) column

- Click into → PGR_MATRIX



BIM Component Rules

PL1.3 OPTIONAL STEPS

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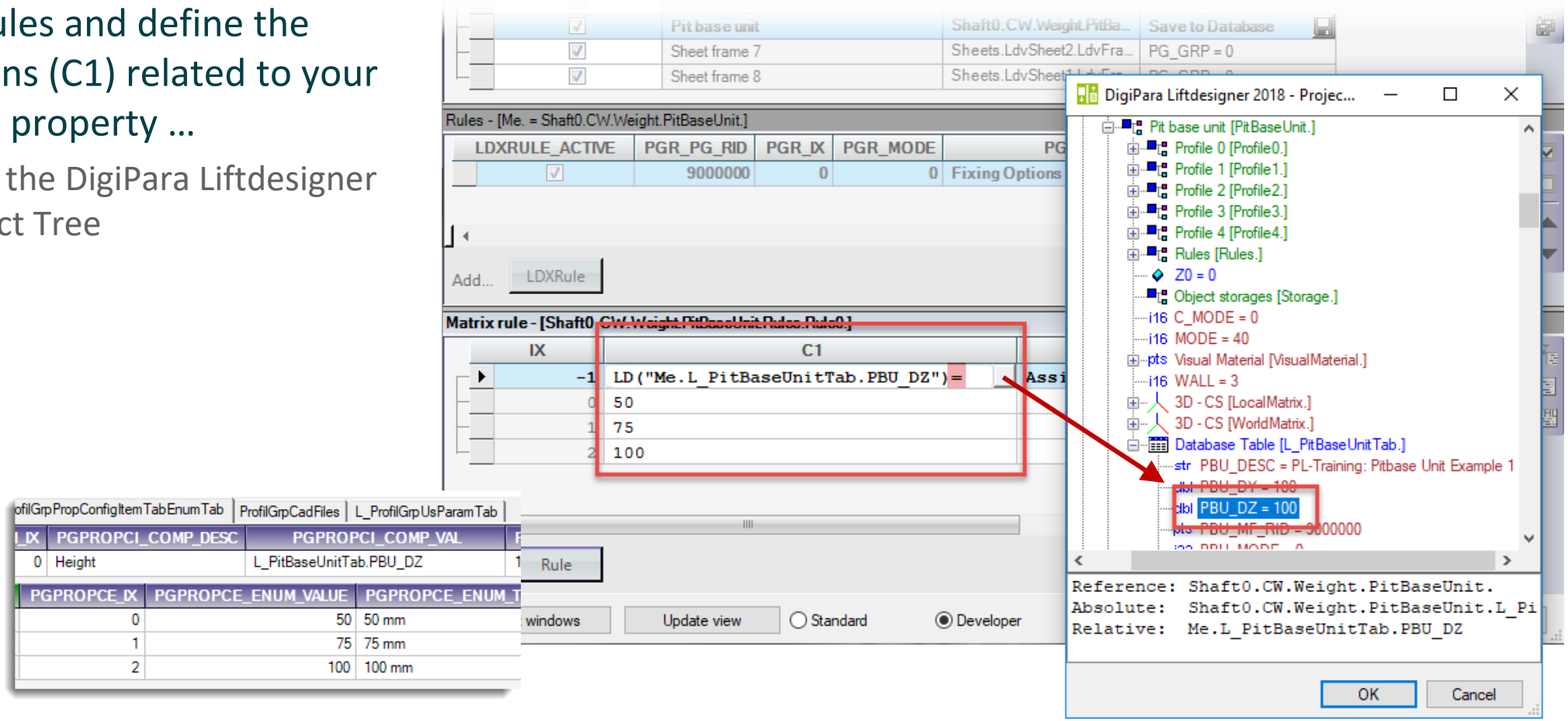
Add… Rules and define the Conditions (C1) related to your dynamic property …

- using the DigiPara Liftdesigner Project Tree

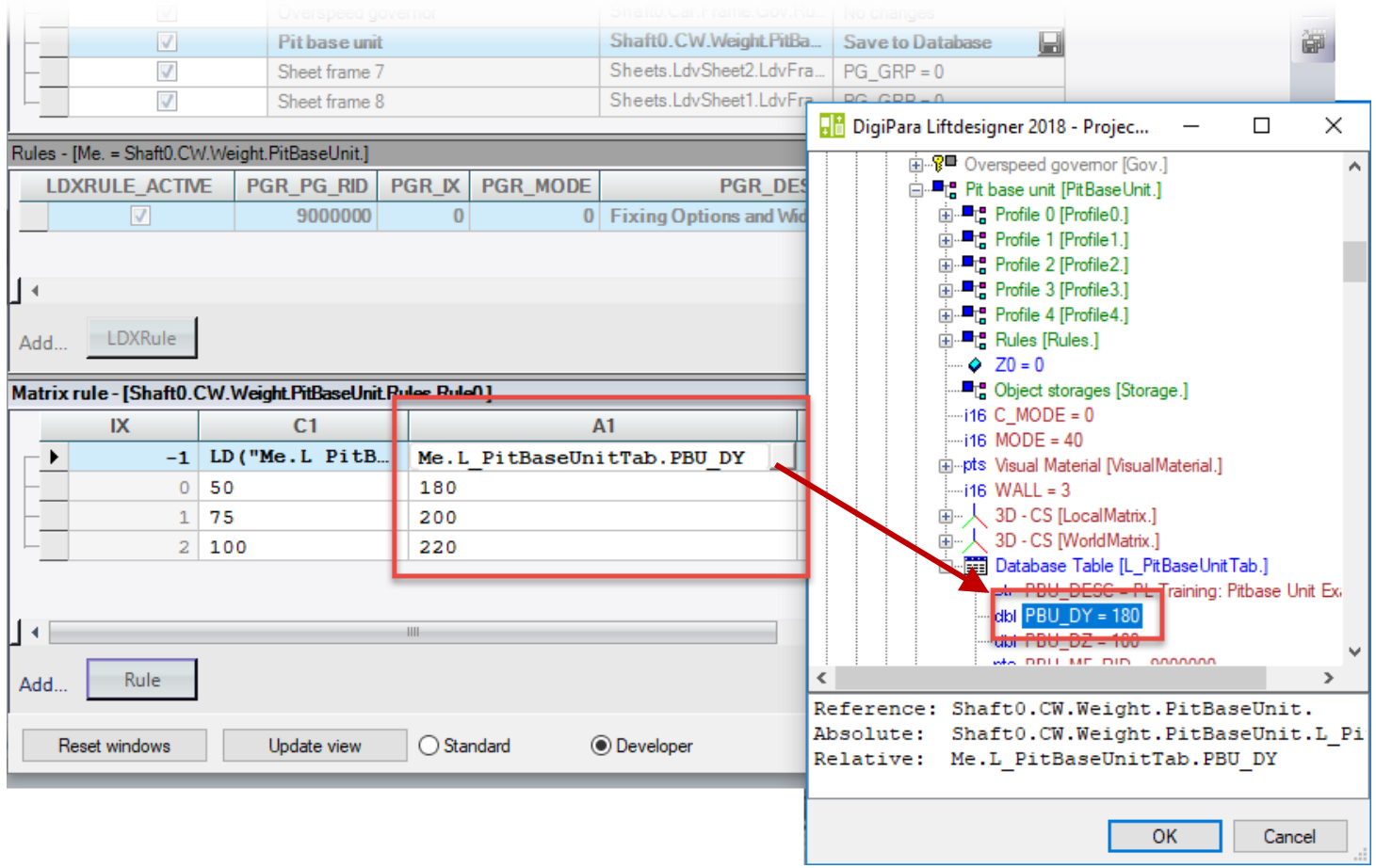


BIM Component Rules

PL1.3 OPTIONAL STEPS

Determine and define the Assignment (A1) 3D Parameter

- using the DigiPara Liftdesigner Project Tree

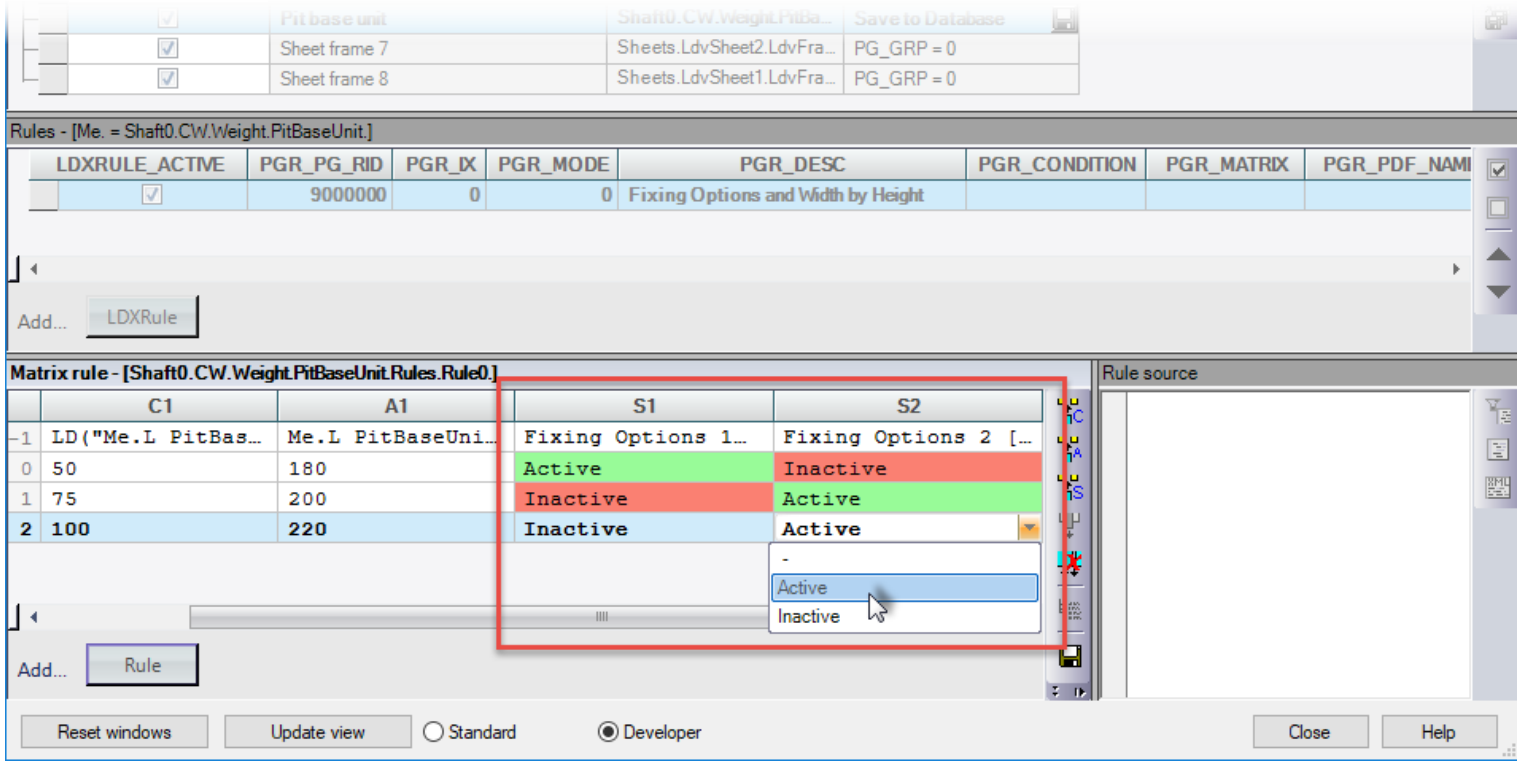


BIM Component Rules

PL1.3 OPTIONAL STEPS

Adapt the visibility of the Subgroups (S1, S2) related to the Conditions

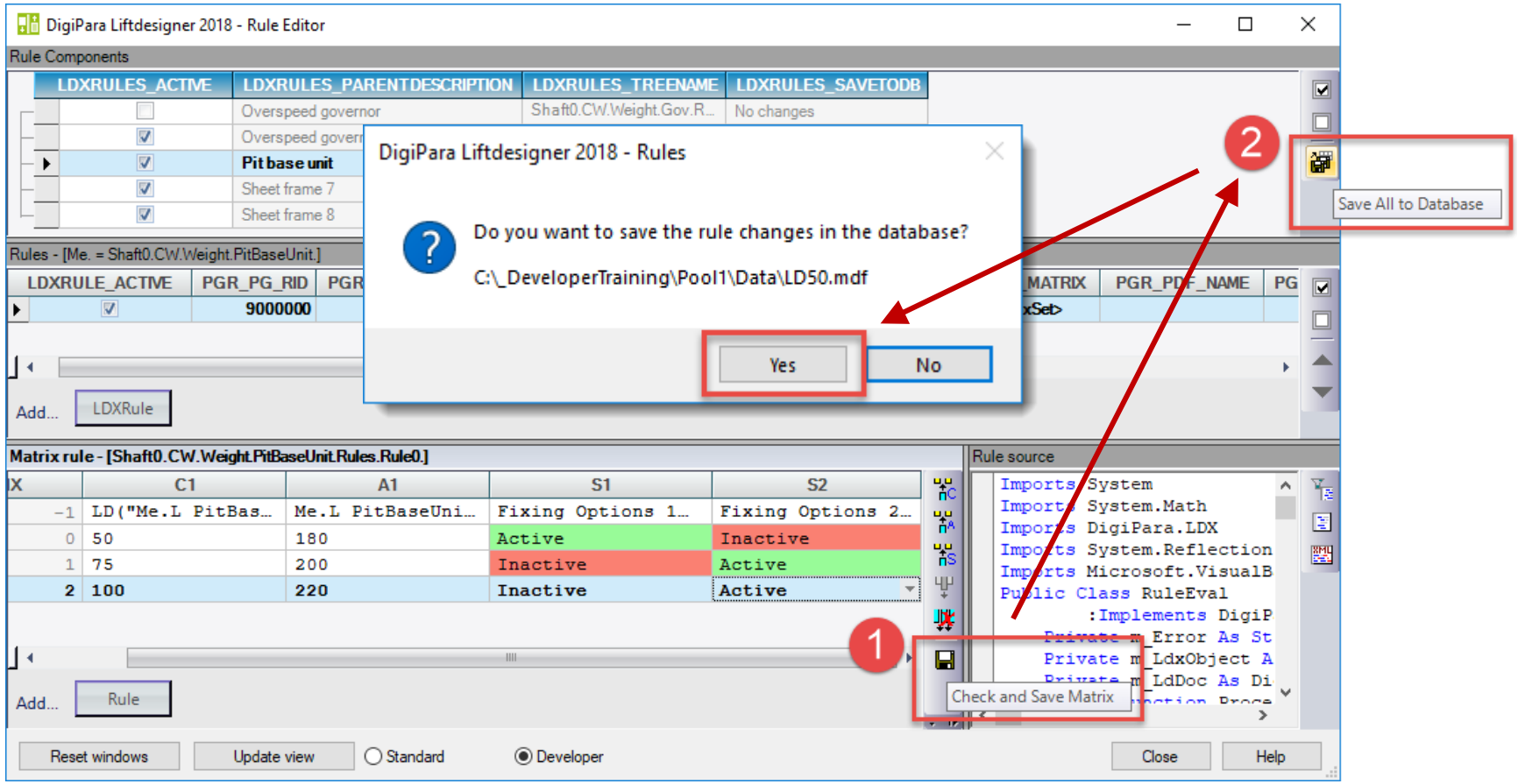
- Set inactive or active for your Product Options



BIM Component Rules

PL1.3 OPTIONAL STEPS

1. Check the rule and save the Matrix …
   - 2. … afterward save all to Database



BIM Component Rules

PL1.3 OPTIONAL STEPS

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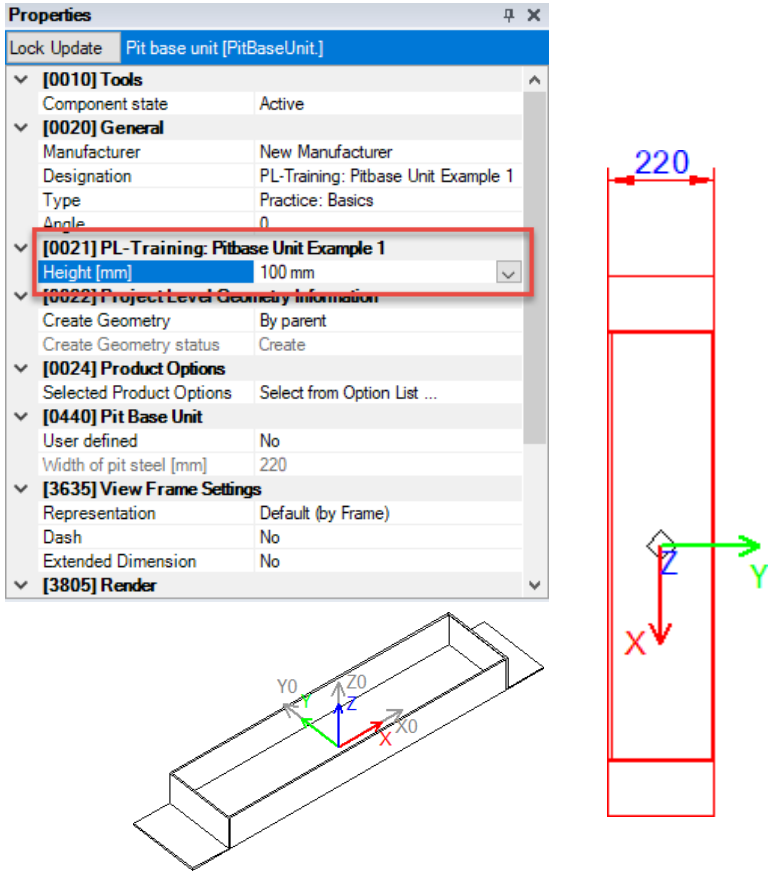
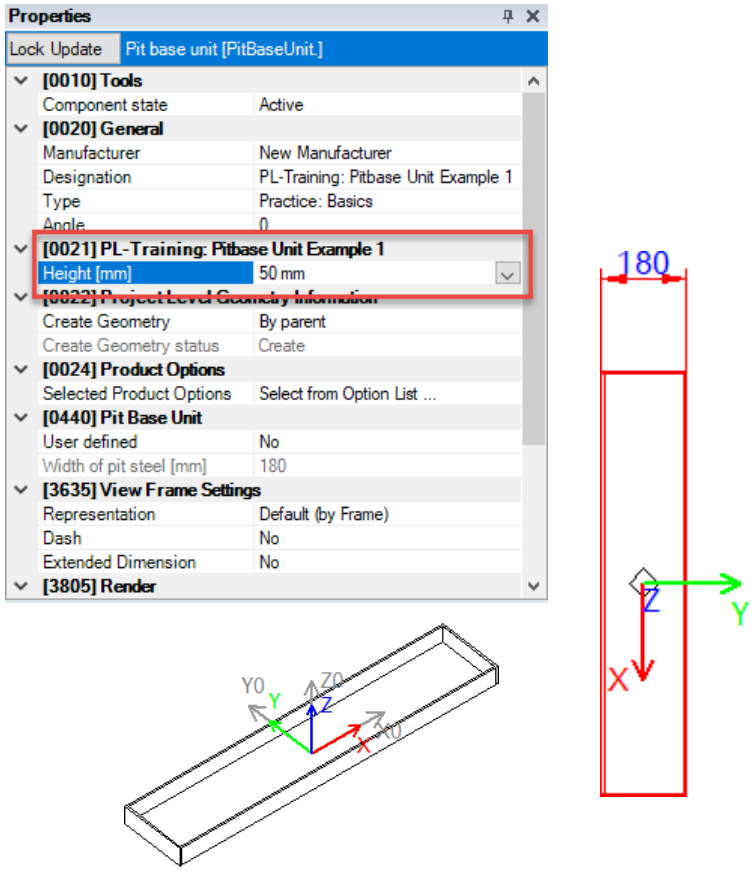
Close the Rule Editor and test the functionality of your new created BIM Component Rules.





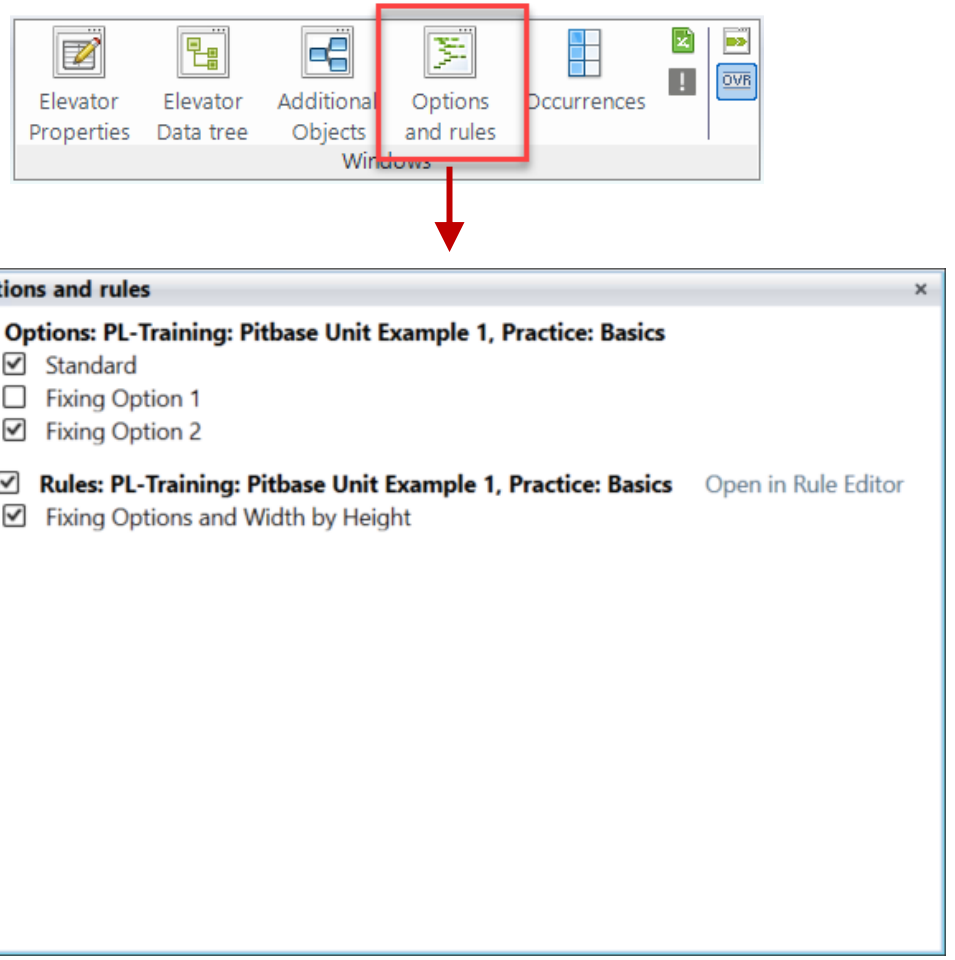
Options and Rules Docking Window

Options and Rules - General Information

PL1.3 OPTIONAL STEPS

Manage component configuration options

- Existing product options and dynamic component rules can be disabled and enabled via the Options and rules docking window by adding or removing a check mark.



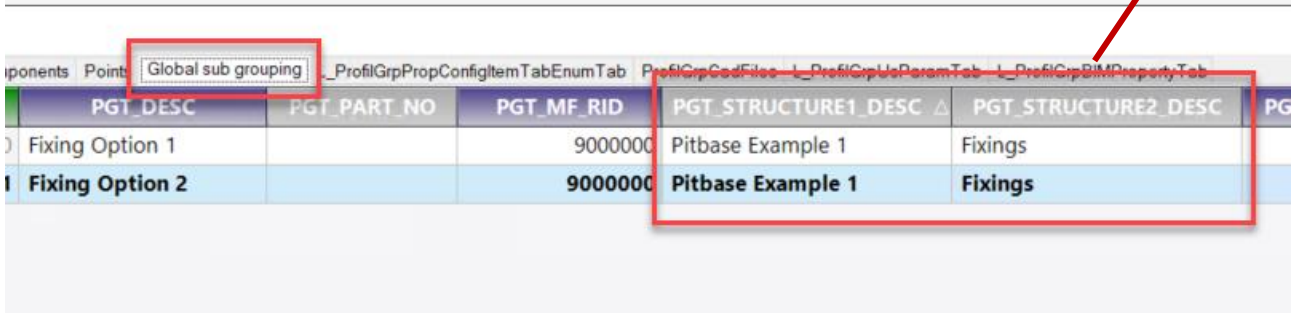
- Existing Product Options
- Created Rules & Rule Editor

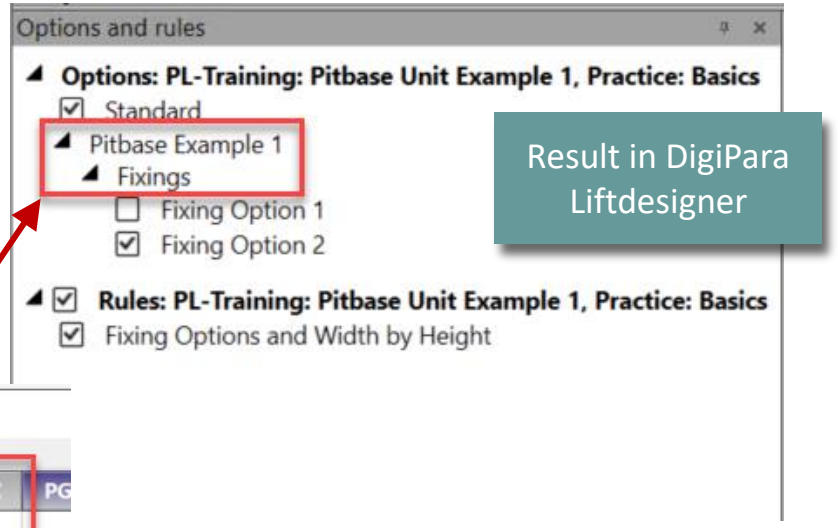
Options and Rules - General Information

PL1.3 OPTIONAL STEPS

Create a clear structure of your options:

- Recommended for a high quantity of Product Options related to your component.
  - Prepared in DigiPara Liftdesigner Datamanager under the related Profile group.



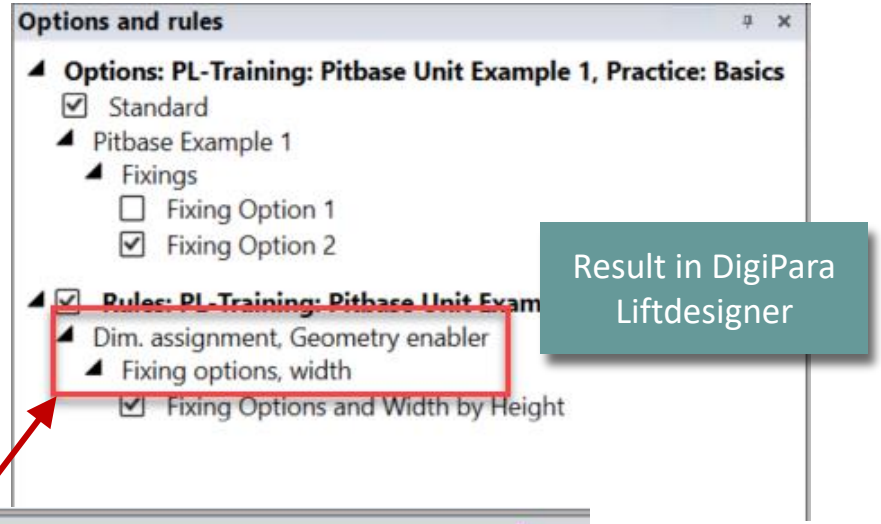


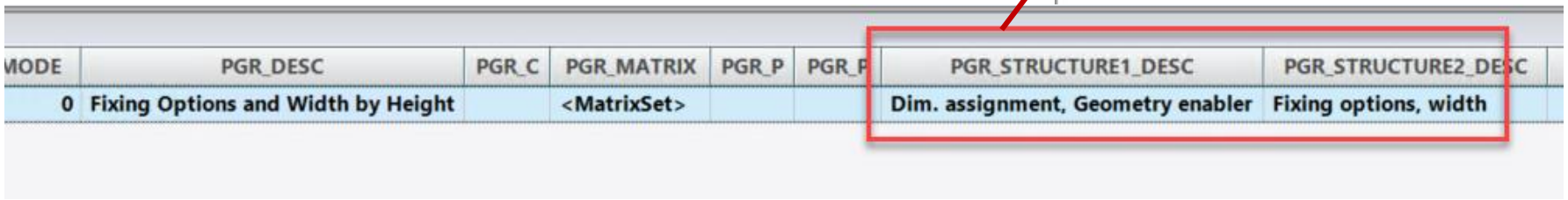
Options and Rules - General Information

PL1.3 OPTIONAL STEPS

Create a clear structure of your rules:

- Recommended for a high quantity of rules related to your component.
  - Prepared in DigiPara Liftdesigner Rule Editor.





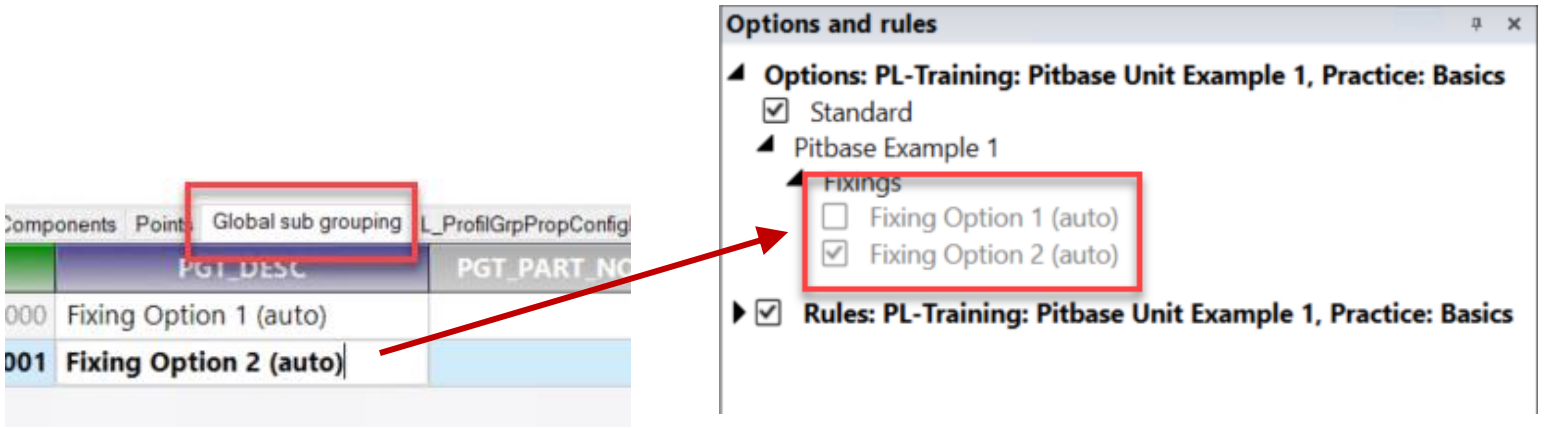
MODE	PGR_DESC	PGR_C	PGR_MATRIX	PGR_P	PGR_F	PGR_STRUCTURE1_DESC	PGR_STRUCTURE2_DESC
0	Fixing Options and Width by Height		<MatrixSet>			Dim. assignment, Geometry enabler	Fixing options, width

Options and Rules - General Information

PL1.3 OPTIONAL STEPS

Recommendation:

- Extend your option description when Product Options are controlled by rules.
  - The expression (auto) displays the option gray colored.



digipara® liftdesigner

Let's have a break!

digipara® liftdesigner

PL1.4

BIM related Settings

Typical Settings for “DigiPara simplified BIM Profiles”

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Set the presentation of your components for the different LOD levels.

- In principle, significantly less should be displayed in the low levels, but as much as necessary.
- Use our online help for more information: LOD Setting Recommendations for DigiPara Liftdesigner users

  - LOD 100: Show for main components only
  - LOD 200: Show a simplified model of your component
  - LOD 300: Show a more detailed model of your component
  - LOD 350: Same as LOD 300
  - LOD 400: Show a model as required for the installation drawing
  - LOD 500: Corresponds to LOD 400 (possibly more)
  - LOD MAX: Shown as designed

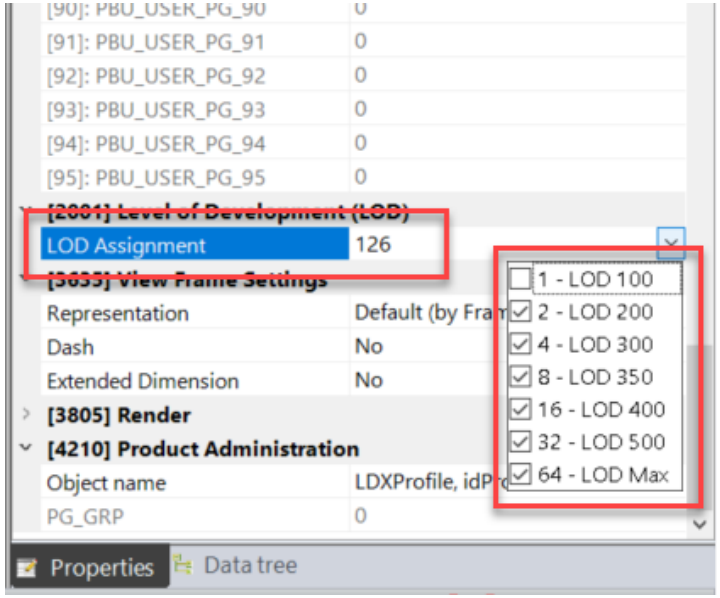
- Do not show screws, nuts and bolts in LOD 100 to LOD 400.

Typical Settings for “DigiPara simplified BIM Profiles”

PL1.4 BIM RELATED SETTINGS

Determine the LOD Assignment of each profile via the related properties

- by adding or removing a check mark

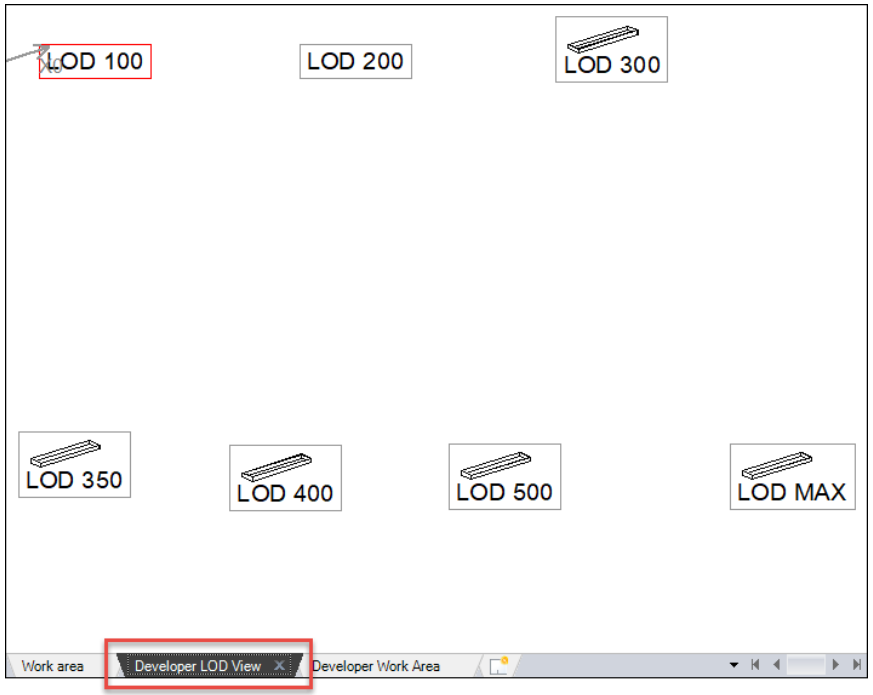


Typical Settings for “DigiPara simplified BIM Profiles”

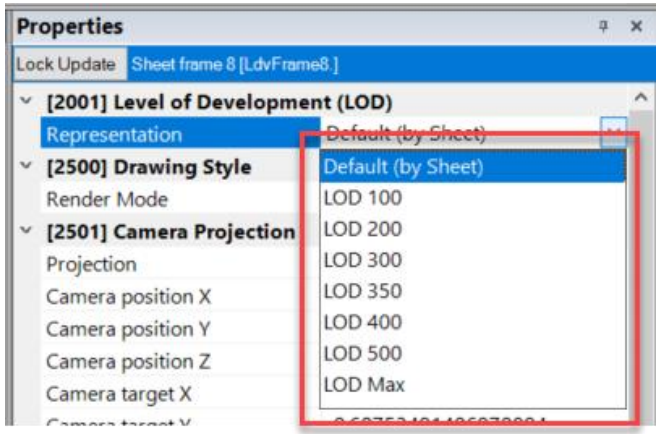
PL1.4 BIM RELATED SETTINGS

Check the LOD representation of your component

Option 1: Developer LOD View frame



Option 2: Representation of your developer view



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PL1.5

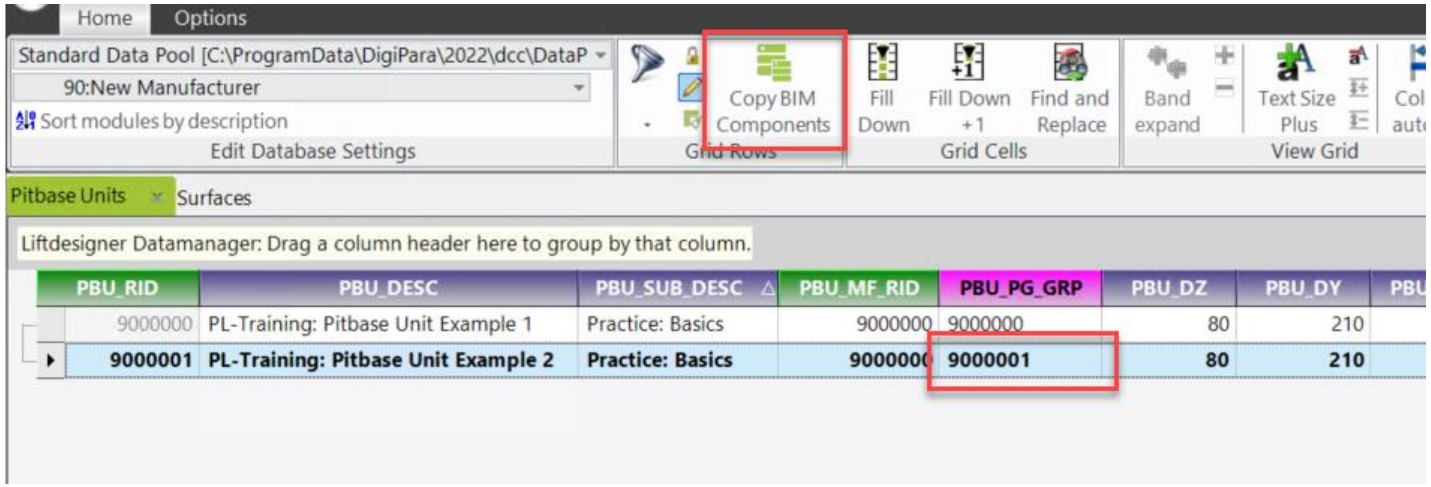
Library expansion

Data table copy operations – General information

PL1.5 LIBRARY EXPANSION

Extend the data table of your component by different copy operations according to your requirements.

- Option 1: Copy BIM Components
  - Create a new component with a new generated profile group. There is no connection to the copied source component.

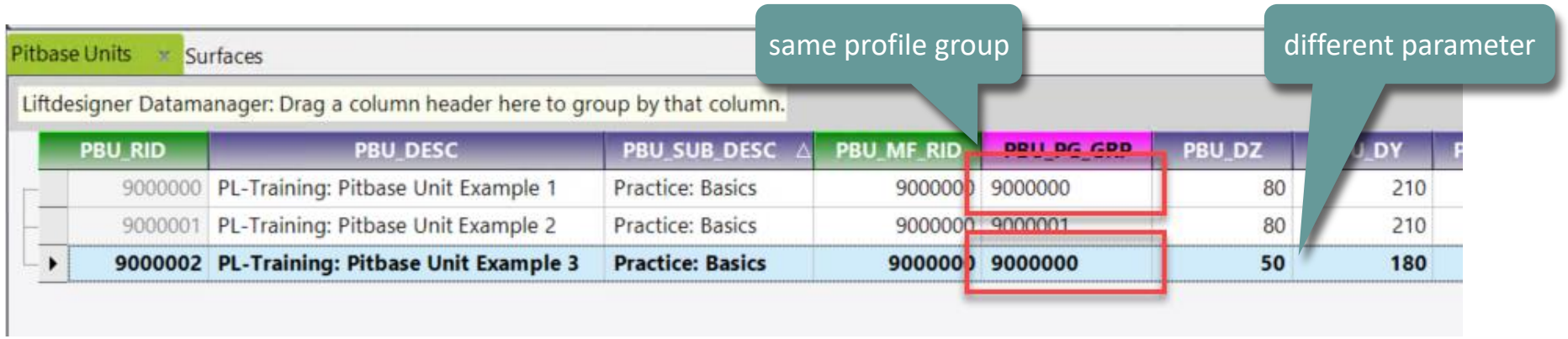


Data table copy operations – General information

PL1.5 LIBRARY EXPANSION

Extend the data table of your component by different copy operations according to your requirements.

- Option 2: by keyboard using Ctrl. C / Ctrl. V
  - Create a new component that shares the same profile group as the source component.



Data table copy operations – General information

PL1.5 LIBRARY EXPANSION

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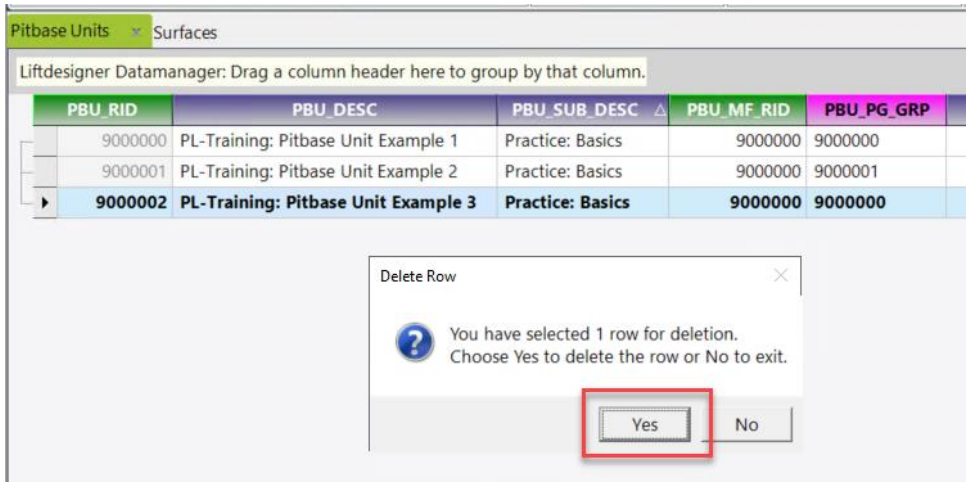
Deleting a data record via the delete button on your keyboard after selecting the data row



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PL1.6

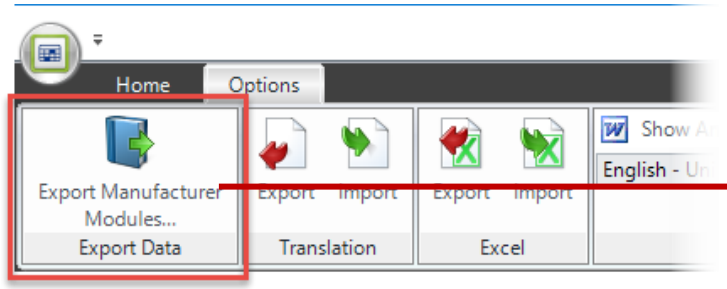
Distribution

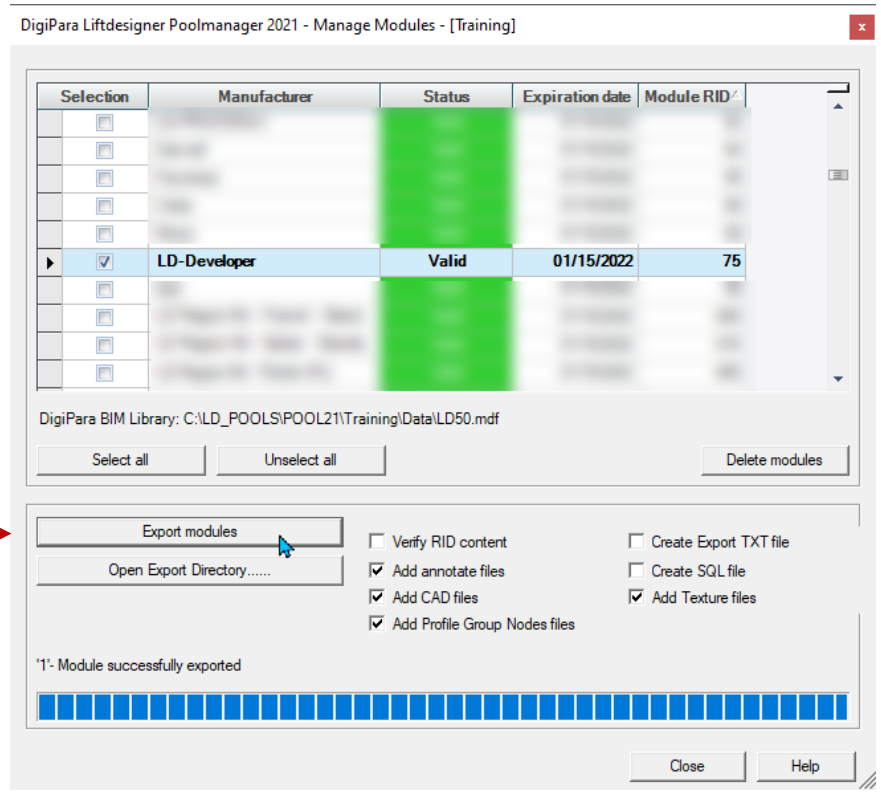
Export and Share

PL1.6 DISTRIBUTION

Share your new data

- The exported **.ldm12* file is located under *Export* folder in the current data pool.
- The usual local path for the Export file: *C:\ProgramData\DigiPara\dcc\DataPool\data\Export*





Export and Share

PL1.6 DISTRIBUTION

Import your new data

- The newly exported manufacturer module (*.ldm12) can be imported into any data pool.
  - The usual local path for the Export file: *C:\ProgramData\DigiPara\dcc\DataPool\data\Import*

For a successful import process, all existing DigiPara Liftdesigner applications must be closed!

digipara® liftdesigner

PL1.7

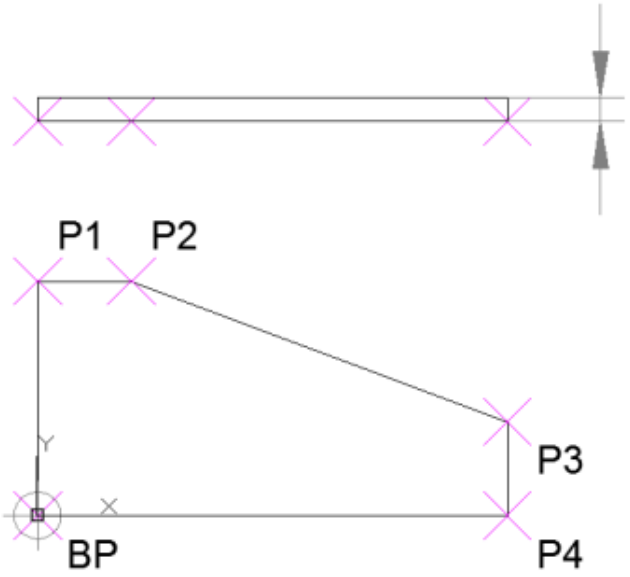
Additional training materials

Profiles with user defined contour

Profiles with user defined contour

via positioning characteristic points

- Add and positioning new points to your component
- Assign the Point Code: User defined Outline
- Link created point contour to a new profile
- Define profile thickness
- Save the BIM Component back into the DigiPara BIM Library



Profiles with user defined contour

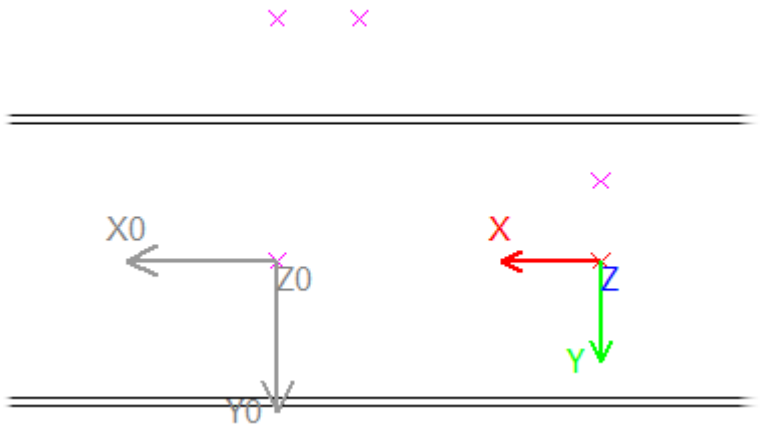
PL1.7 ADDITIONAL TRAINING MATERIALS

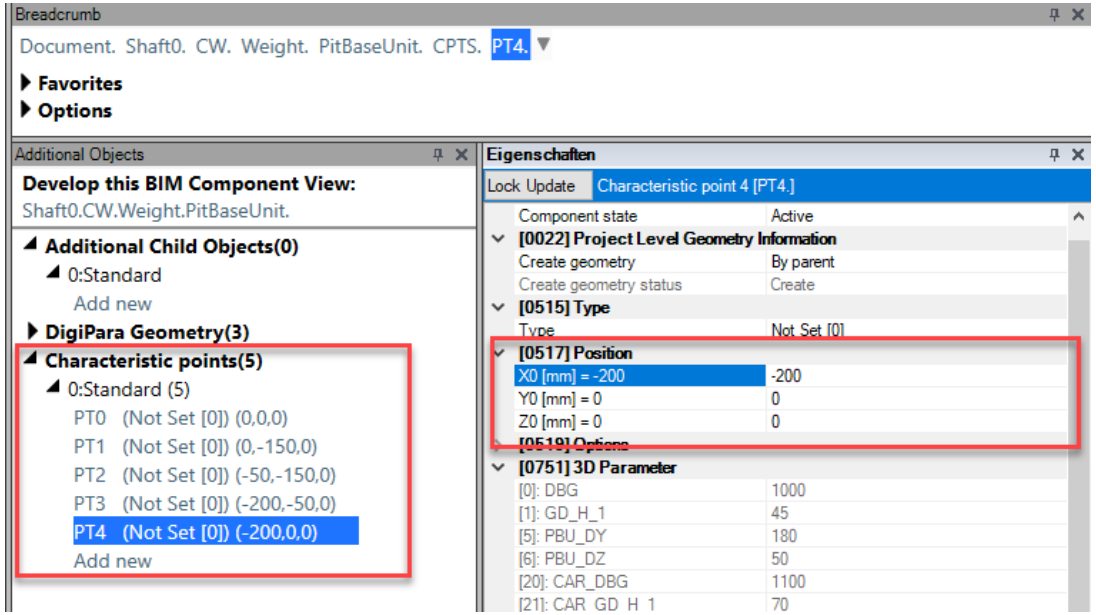
digipara® liftdesigner

Determining the size of user defined profiles

- Add and positioning new points to your component

Important: Definition of the location only in the X0 and Y0 direction!





Profiles with user defined contour

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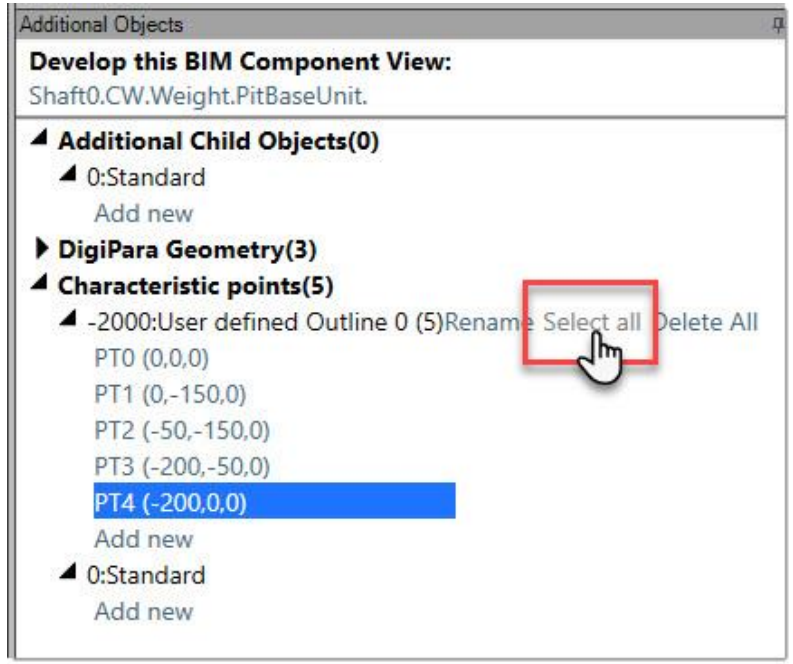
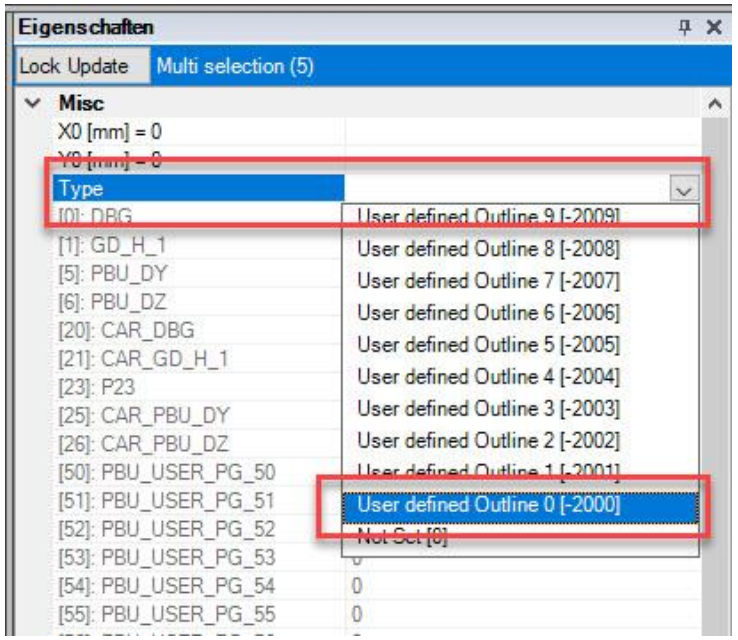
Assign the Point Code: User defined Outline

- The points must be created in the correct order!





Profiles with user defined contour

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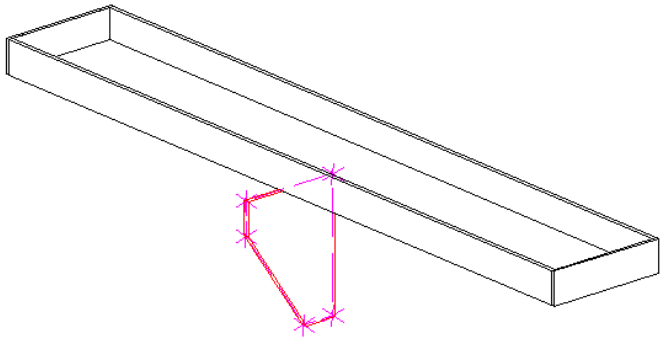
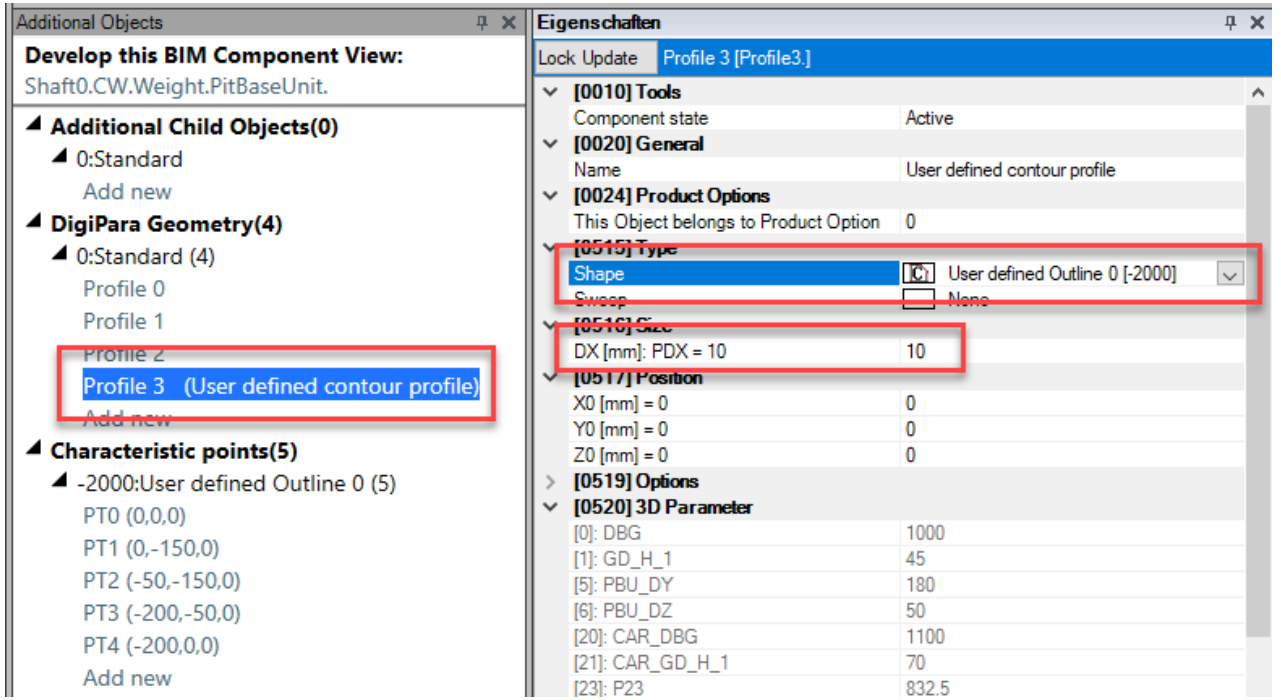
Link created point contour to a new profile

- Define profile thickness





Profiles with user defined contour

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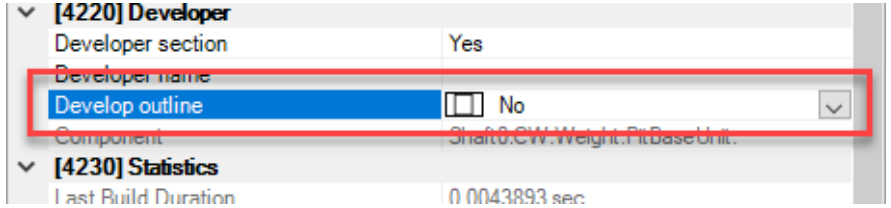
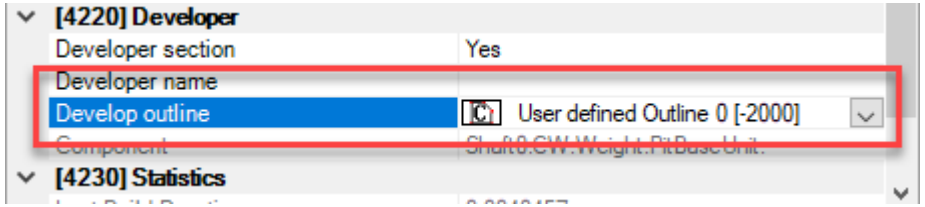
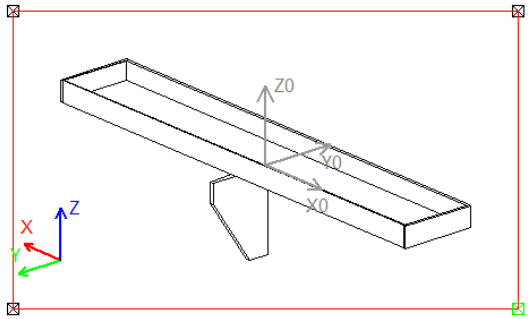
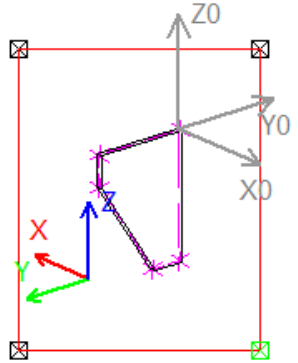
Recommended settings for several profiles with different individual contours.

- View related developer settings







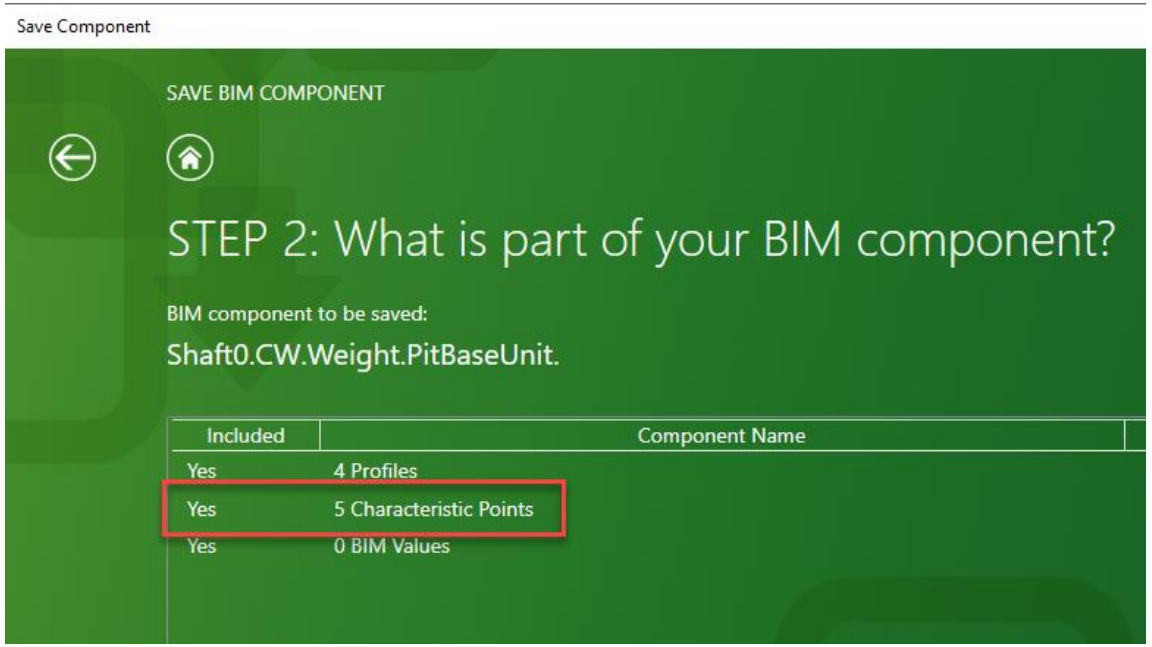


Profiles with user defined contour

PL1.7 ADDITIONAL TRAINING MATERIALS

Save this BIM Component back into …

- … the DigiPara BIM Library



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PL1.8

Summary & custom Q&A's

Congratulations

You reached the next level

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Your instructor will be available for individual questions after the module training.

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