digipara® liftdesigner

Product Loading: Car Frame

PL2

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

CAR FRAME AND ACCESSORIES

PL2.1 Session 1

- Typical Processes
  - Car Frame

PL2.2 Session 2

- Optional Steps
  - Car Frame
- Typical Processes (related components)
  - Pulley Beam
  - Pulley

PL2.3 Additional training material

- Cutouts for Profiles

PL2.4 Summary

- Custom Q&A’s

Product Loading Workflow

CAR FRAME AND ACCESSORIES

Typical Processes

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

Optional Steps

- Dynamic Properties

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

- BIM Component Rules

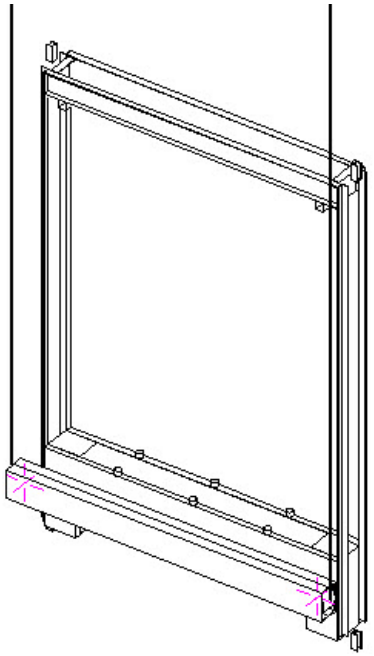
  Add logic that is related to your BIM Component.

- Dynamic Dimension Points

  Define points for own dynamic dimensions

Car Frame and Accessories

Expected result



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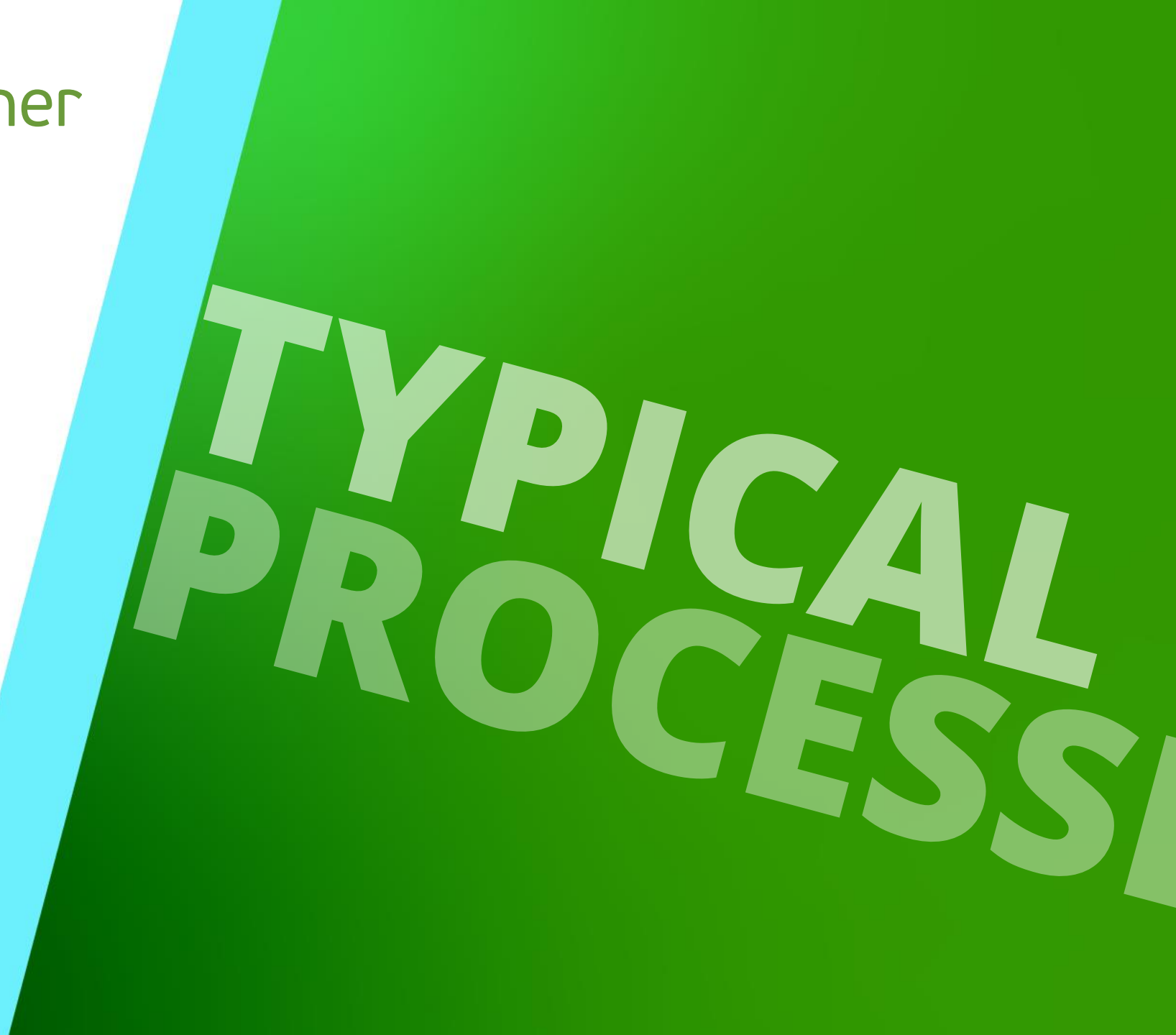
PL2.1

Typical Processes

Car Frame and Accessories

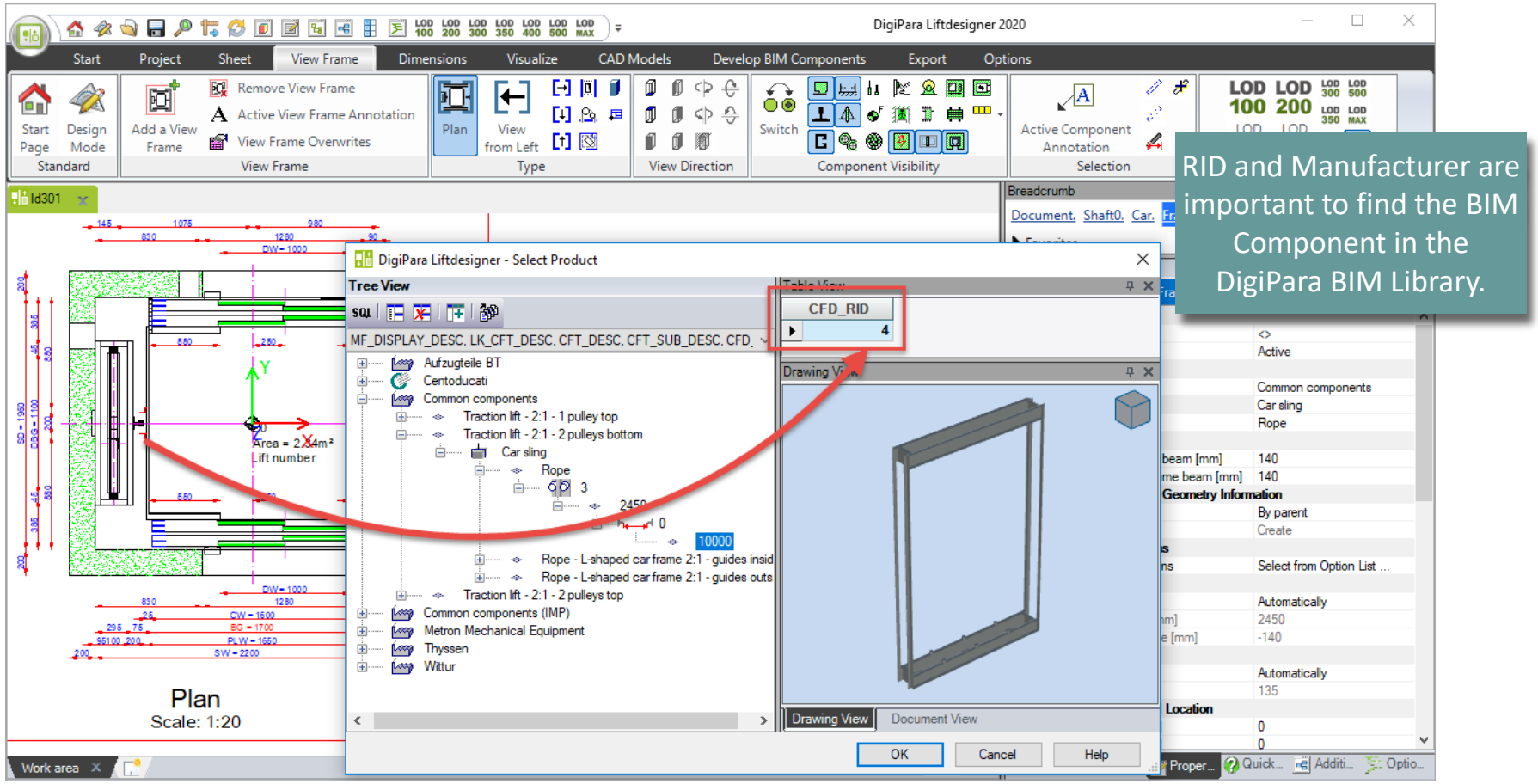


Copy a similar BIM Component

Copy a similar BIM Component

PL2.1 TYPICAL PROCESSES

Copy a similar BIM Component



RID and Manufacturer are important to find the BIM Component in the DigiPara BIM Library.

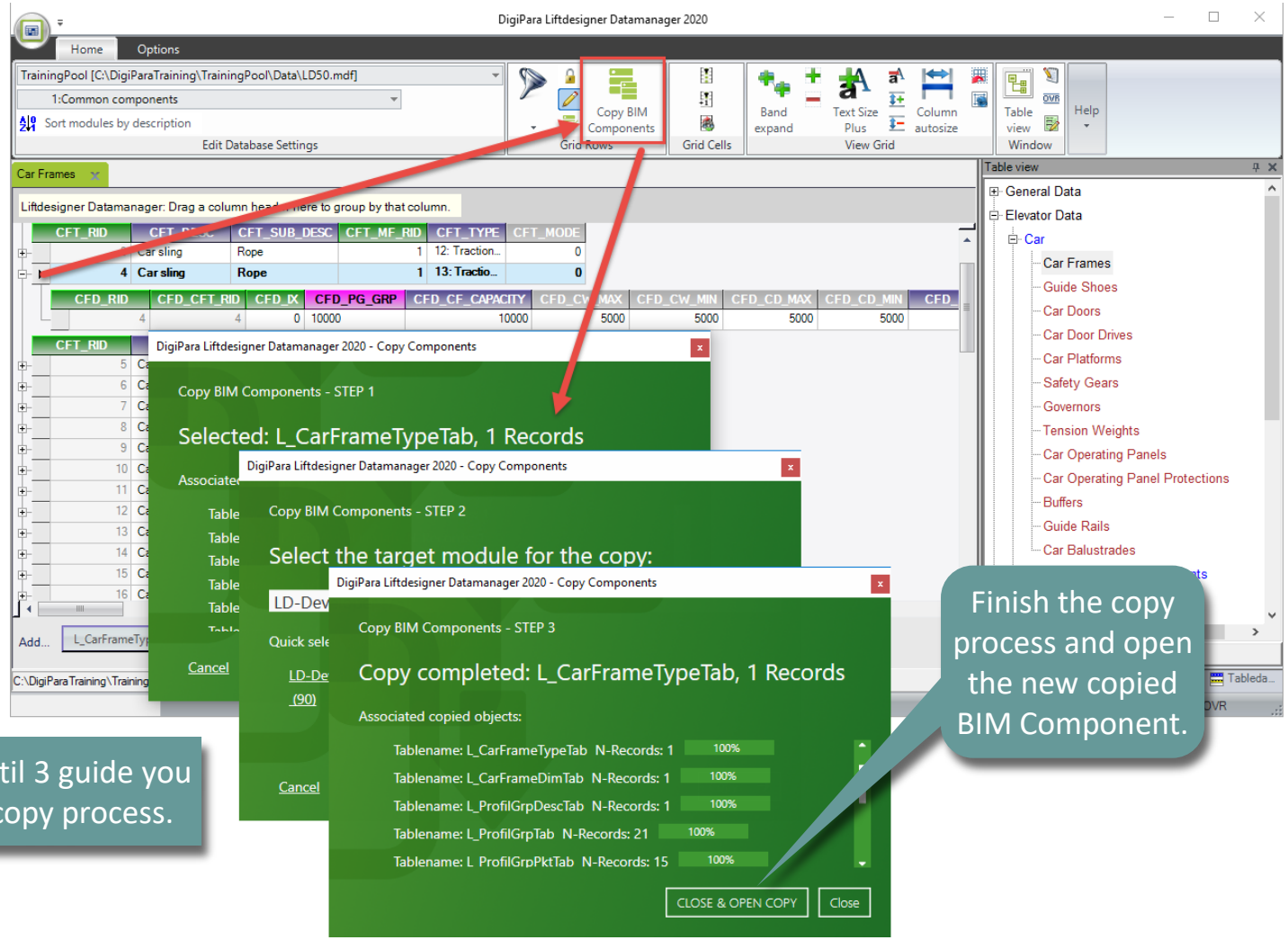
Copy a similar BIM Component

PL2.1 TYPICAL PROCESSES

Copy a similar BIM Component

- in DigiPara Datamanager

The BIM Component is copied with all parameter and values to a new manufacturer / DigiPara BIM Library.



The steps 1 until 3 guide you through the copy process.

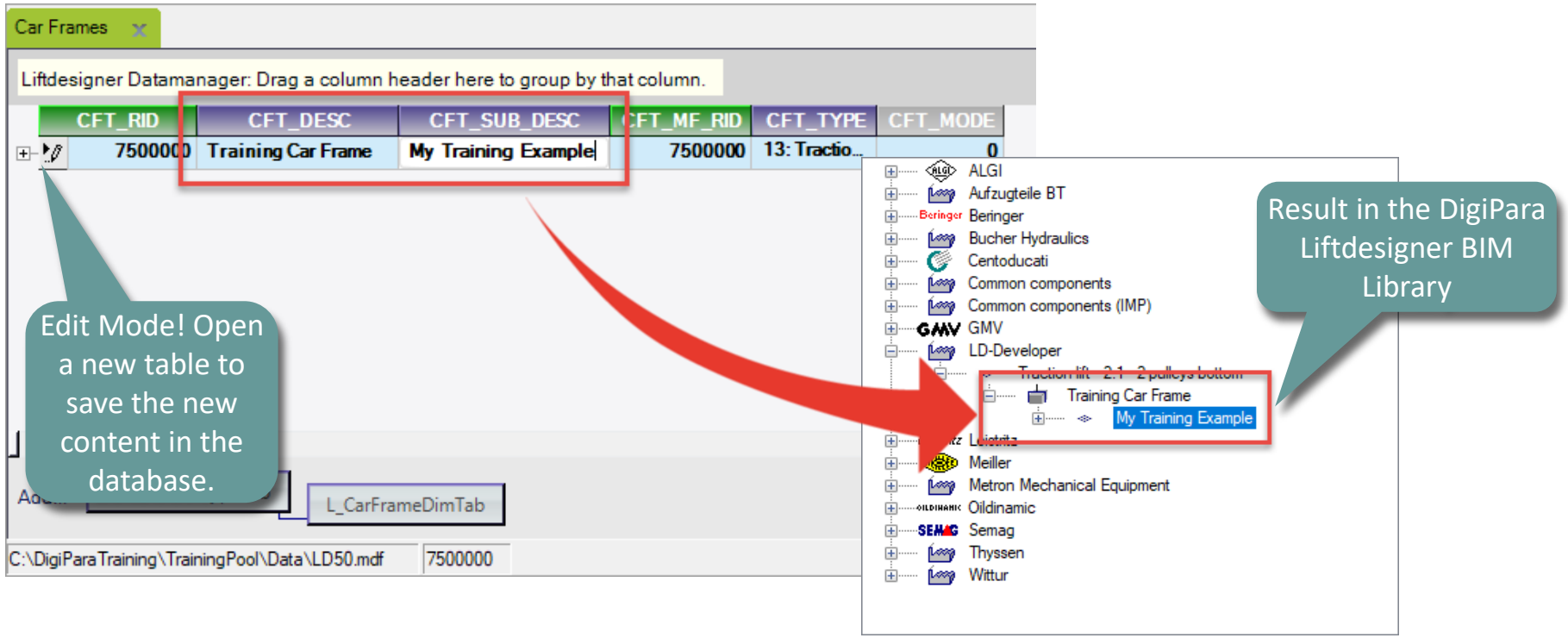
Finish the copy process and open the new copied BIM Component.

Edit the Meta Data

Edit the Meta Data – Description

- in DigiPara Liftdesigner Datamanager

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



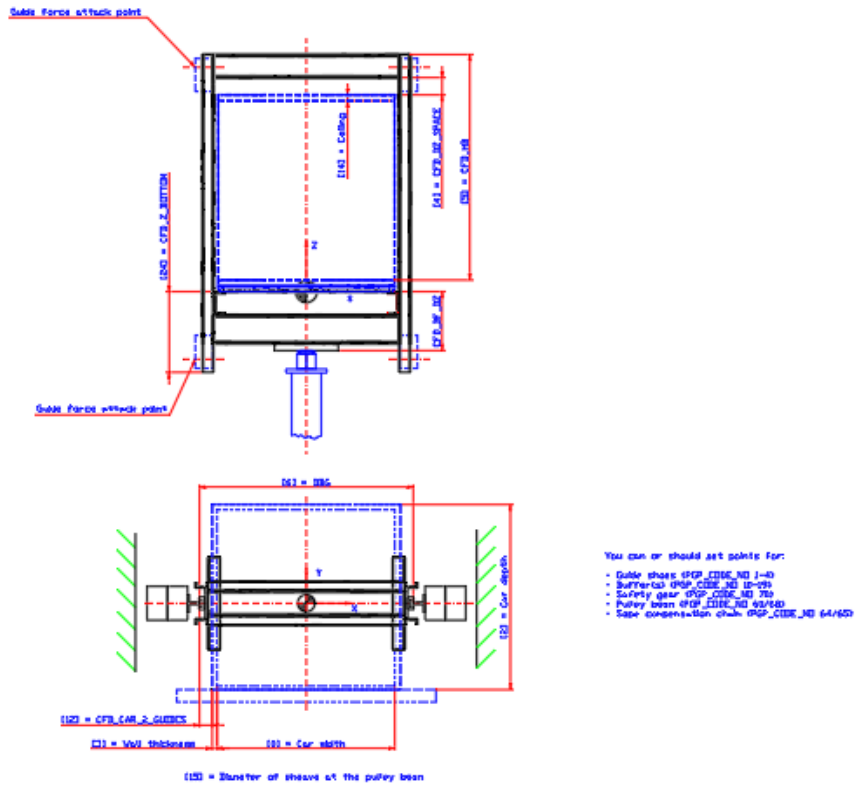
Explanation of Parameters and Values

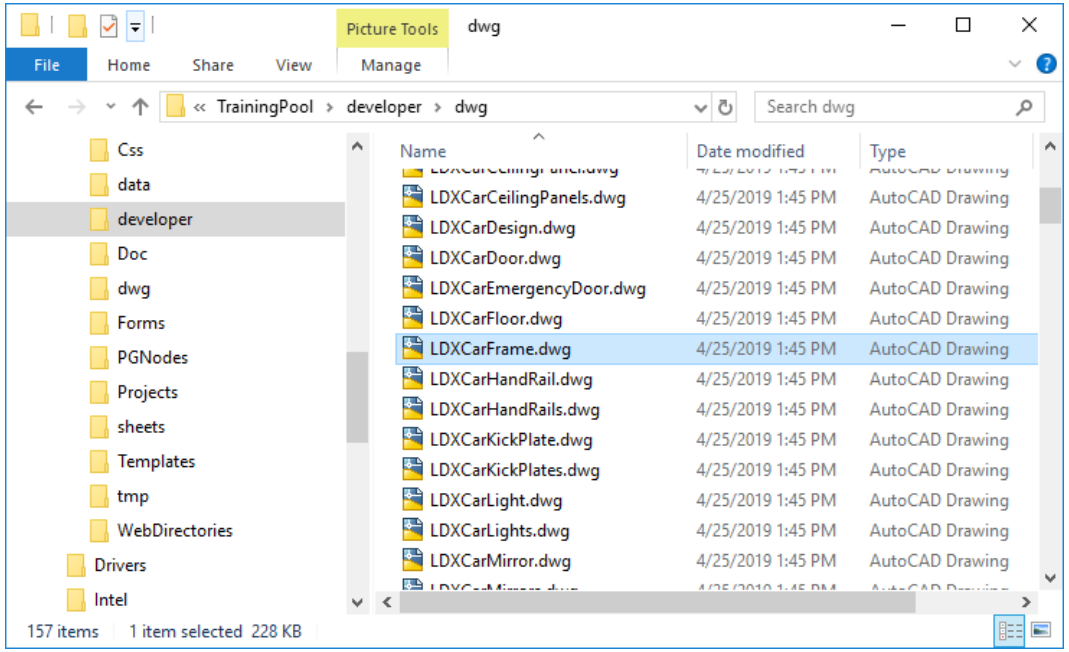
Explanation of Parameters and Values

PL2.1 TYPICAL PROCESSES

Use the Explanation of Parameters and Values

- (C:\ProgramData\DigiPara\dcc\DataPool\developer)





Explanation of Parameters and Values

PL2.1 TYPICAL PROCESSES

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Use the Explanation of Parameters and Values

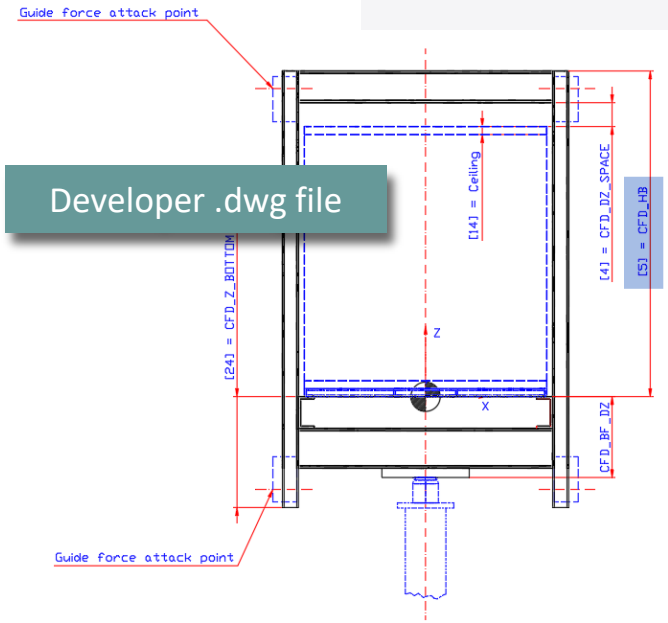
- Define typical 3D Parameter: Type
  - in DigiPara Liftdesigner Datamanager

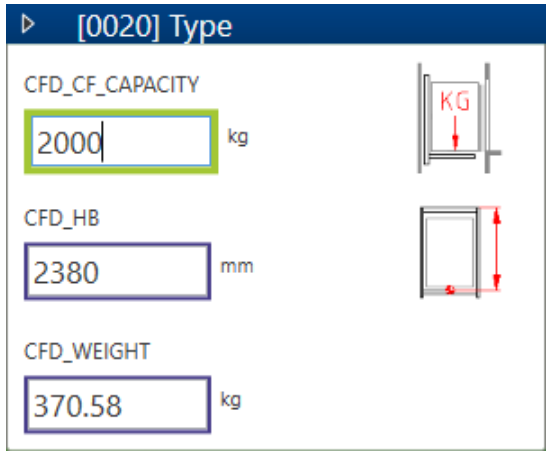
CFD_CF_CAPACITY	The maximum capacity of the car frame in kg
CFD_HB	The distance in the z-axis between the top edge of the finished floor of the car frame and the highest point of the car frame construction. ☛ **Don't include the guide shoes or hand rails!**
CFD_WEIGHT	Weight of the car frame

CFT_DESC	CFT_SUB_DESC	CFT_MF_RID	CFT_TYPE	CFT_MODE
Training Car Frame	My Training Example	7500000	13: Traction...	0

CFD_CFT_RID	CFD_IX	CFD_PG_GRP	CFD_CF_CAPACITY	CFD_CW_MAX	CFD_CW_MIN	CFD_CD_MAX	CFD_CD_MIN	CFD_HB	CF
7500000	0	7500003	2000	5000	5000	5000	5000	2380	

FD_CPF_RID	CFD_WEIGHT	FD_DBG
	370,58	





Explanation of Parameters and Values

PL2.1 TYPICAL PROCESSES

digipara® liftdesigner

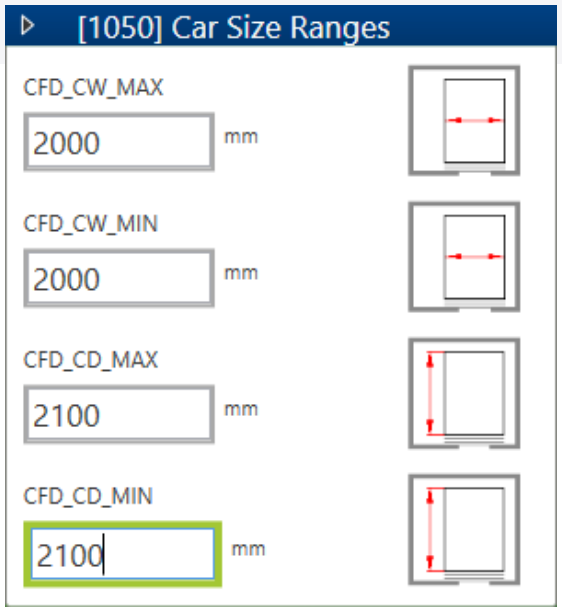
Use the Explanation of Parameters and Values

- Define typical 3D Parameter: Car Size Ranges
  - in DigiPara Liftdesigner Datamanager

CFD_CW_MAX	Maximum width of the cabin
CFD_CW_MIN	Minimum width of the cabin
CFD_CD_MAX	Maximum depth of the cabin
CFD_CD_MIN	Minimum depth of the cabin

CFT_RID	CFT_DESC	CFT_SUB_DESC	CFT_MF_RID	CFT_TYPE	CFT_MODE
7500000	Training Car Frame	My Training Example	7500000	13: Traction...	0

CFD_RID	CFD_CFT_RID	CFD_IX	CFD_PG_GRP	CFD_CF_CAPACIT	CFD_CW_MAX	CFD_CW_MIN	CFD_CD_MAX	CFD_CD_MIN	CFD_HB	CF
7500000	7500000	0	7500003	2000	2000	2000	2100	2100	2380	

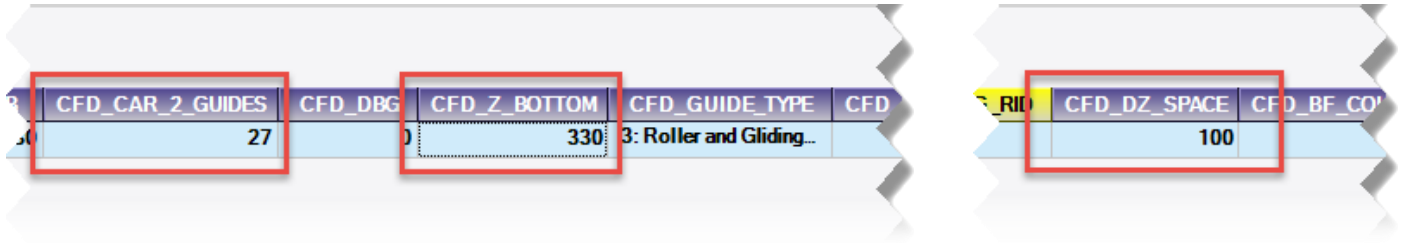


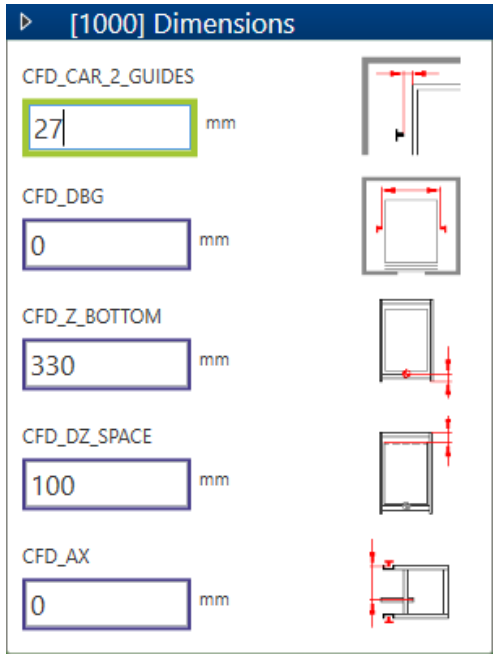
Explanation of Parameters and Values

digipara® liftdesigner

Use the Explanation of Parameters and Values

- Define typical 3D Parameter: Dimensions
  - in DigiPara Liftdesigner Datamanager





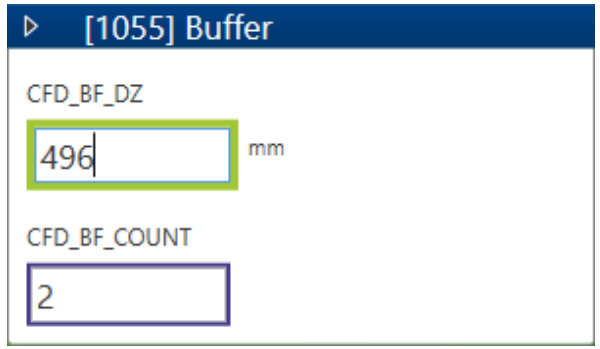
CFD_CAR_2_GUIDES	The distance between the surface of the guide and the outside of the cabin. See picture for different use of the variable for the different types of car frames.
CFD_DBG	The distance between guides. Only used for car-frames with lateral direct drive (1:1 System, 1 hydraulic jack) and car-frames with tackle hydraulic jack drive (2:1 System, 1 hydraulic jack). In the other cases insert "0".
CFD_Z_BOTTOM	Distance between the IP (insert point) of the car frame and the lowest point of the car frame construction

CFD_DZ_SPACE	The distance between the top side of the ceiling and the bottom side of the top crossbar of the car frame construction.

Explanation of Parameters and Values

Use the Explanation of Parameters and Values

- Define typical 3D Parameter: Buffer
  - in DigiPara Liftdesigner Datamanager



CFD_BF_DZ	The distance from the IP (insert point) of the car frame and the impact point of the buffer(s).

CFD_BF_COUNT	The quantity of buffers which are used for this car frame.

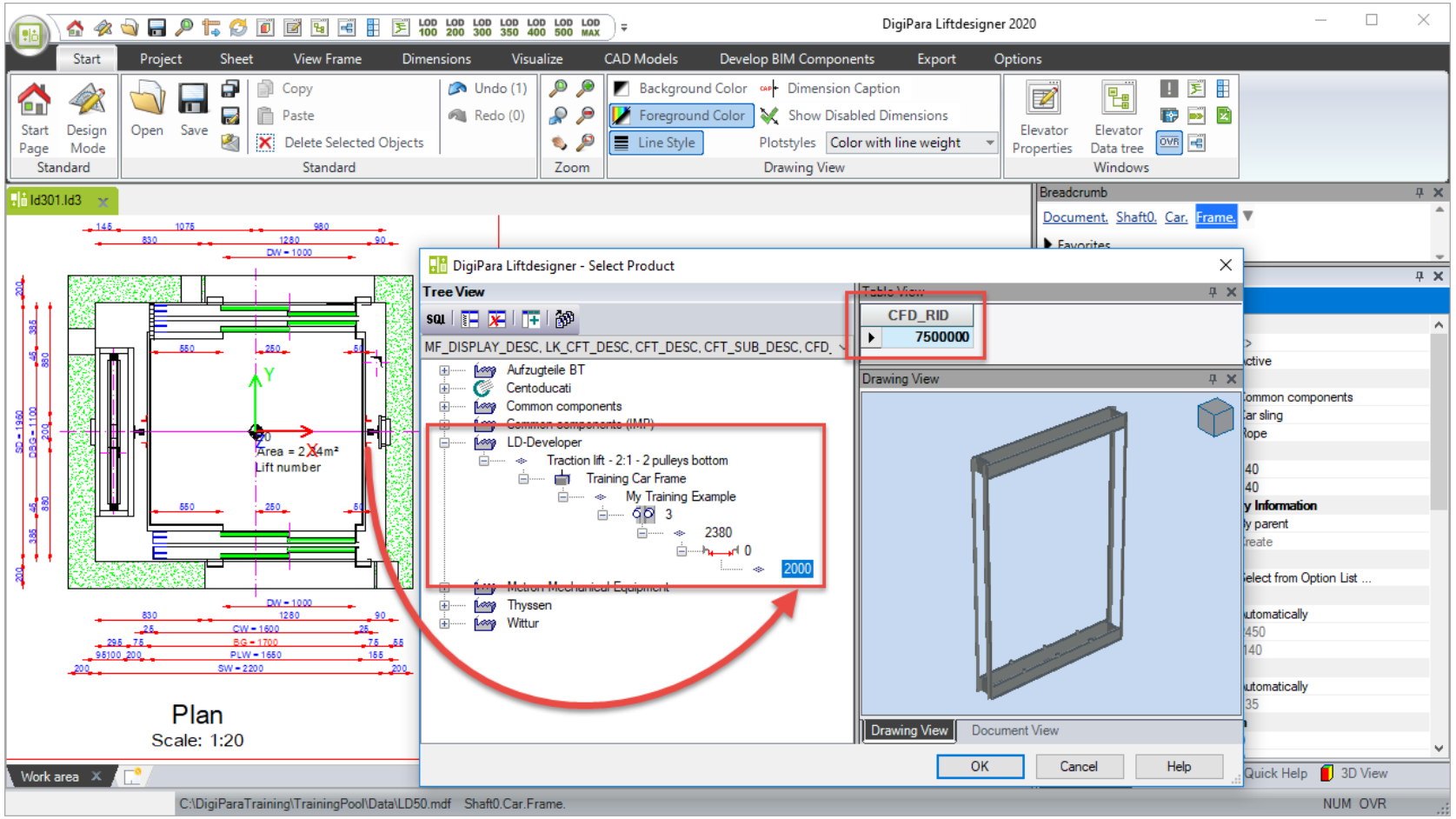
Load your edited BIM Component

Load your edited BIM Component

PL2.1 TYPICAL PROCESSES

Load your edited BIM Component

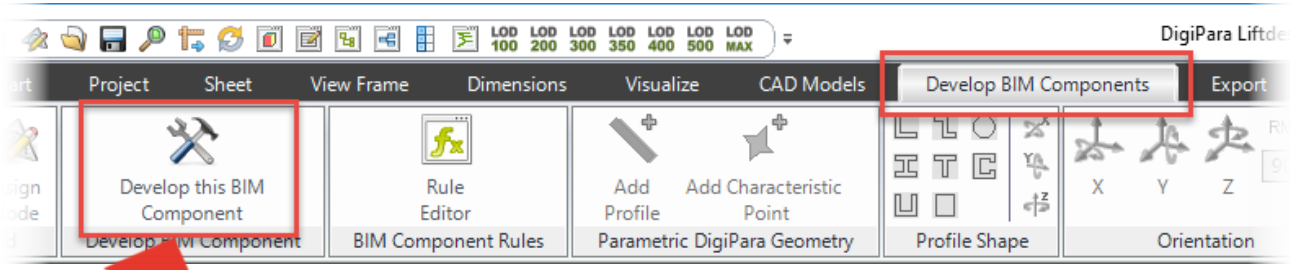
- in DigiPara Liftdesigner

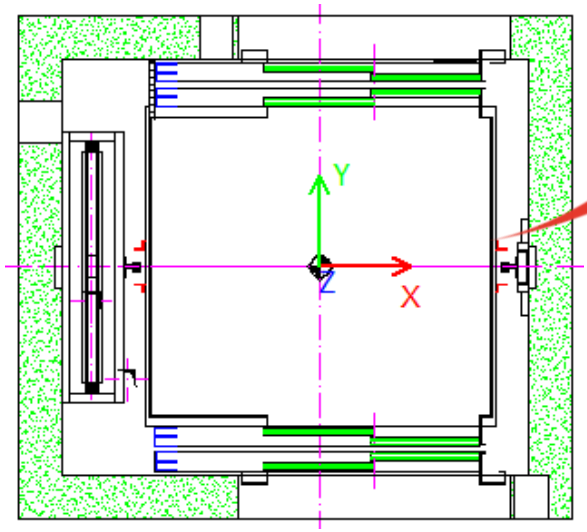


Load the Developer Work Area

Load the Developer Work Area

- in DigiPara Liftdesigner via the BIM Component





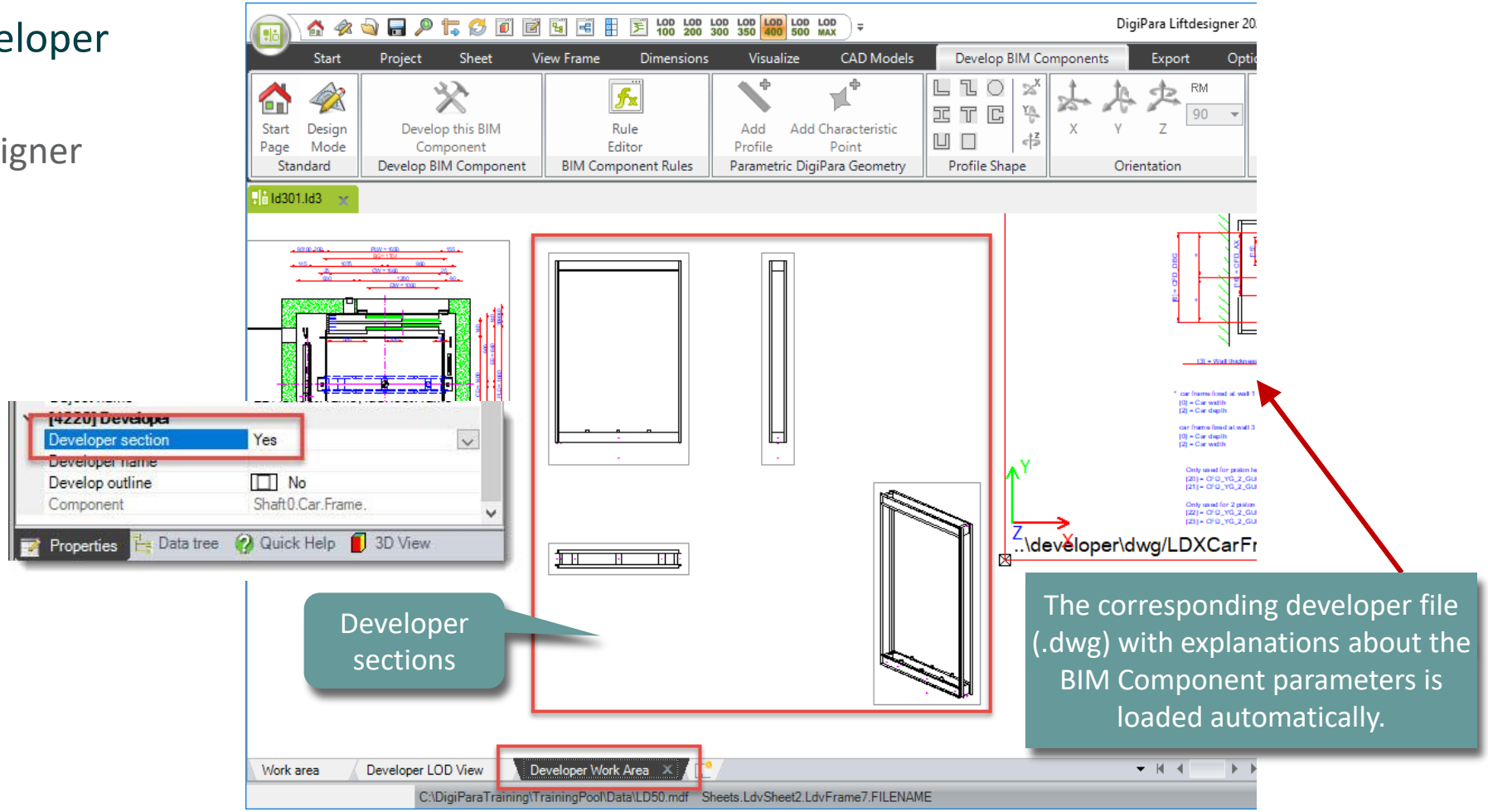
Select the corresponding BIM Component in an existing view frame and click on the button: Develop this BIM Component

Load the Developer Work Area

PL2.1 TYPICAL PROCESSES

Working in the Developer Work Area

- in DigiPara Liftdesigner



Modify the 3D Geometry

Modify the 3D Geometry

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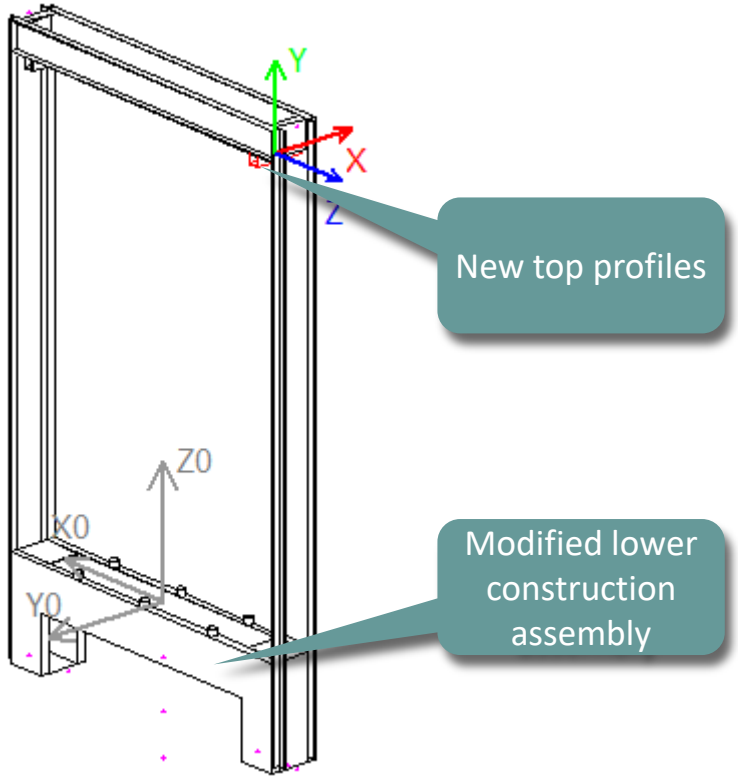
Expected result:

- Modified existing profiles
- Defined new profiles



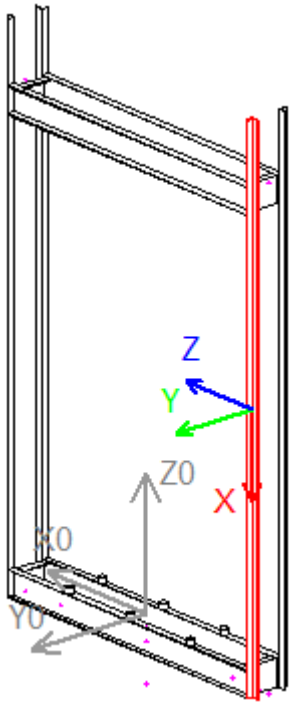
Modify the 3D Geometry

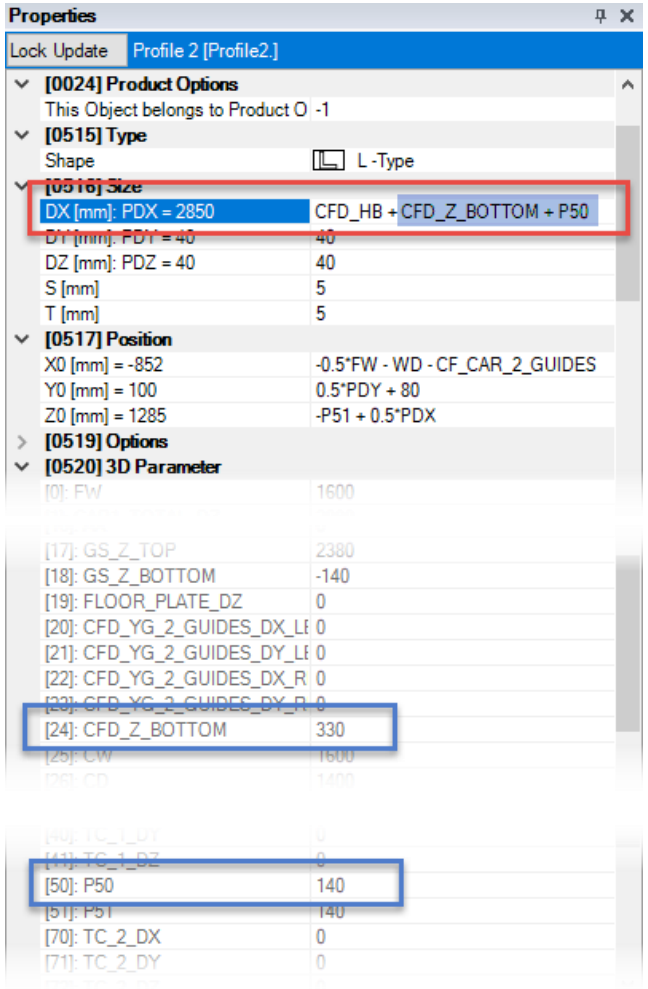
digipara® liftdesigner

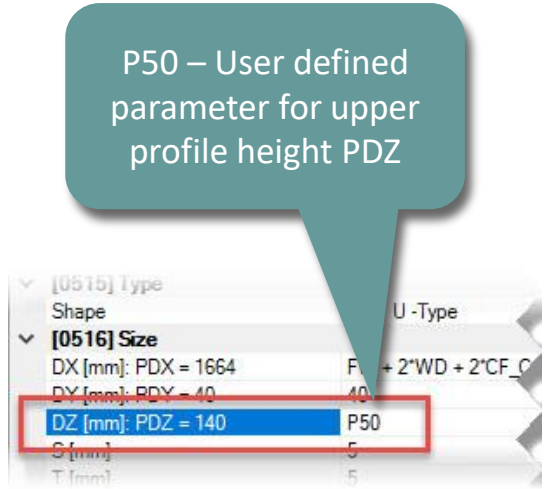
Customize existing Profiles - Size

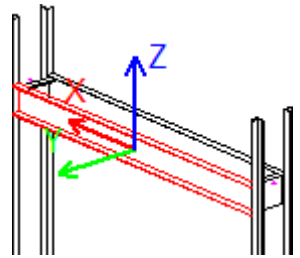
- via the Properties Window in DigiPara Liftdesigner

Copy formulas and values from one profile to another using the Properties Window







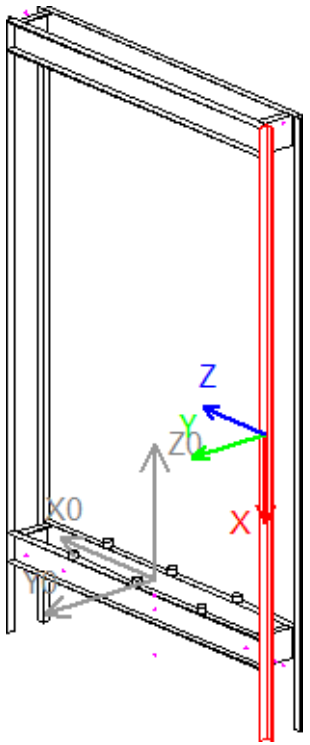


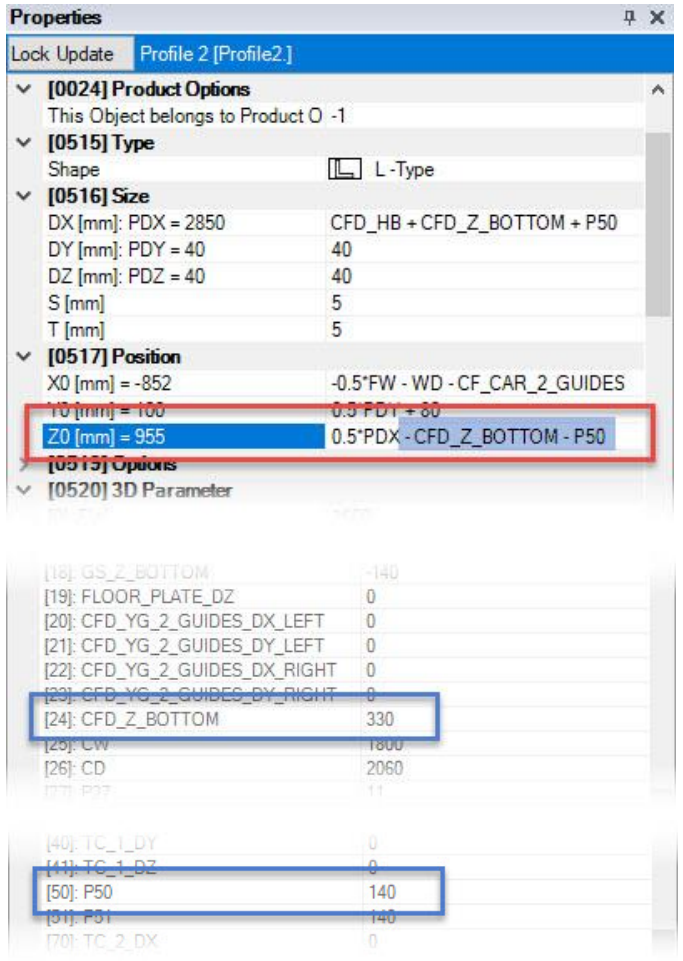
Modify the 3D Geometry

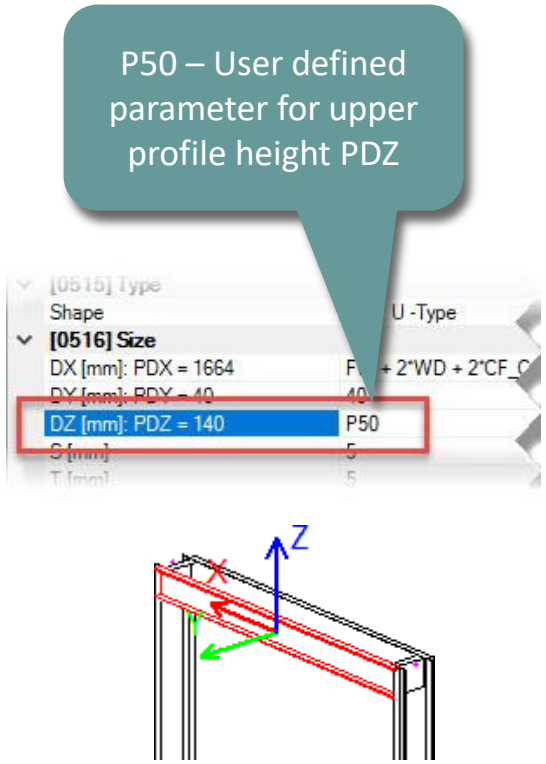
digipara® liftdesigner

Customize existing Profiles – Position

- via the Properties Window in DigiPara Liftdesigner





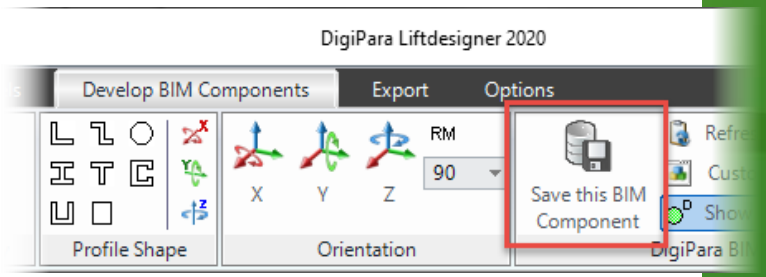


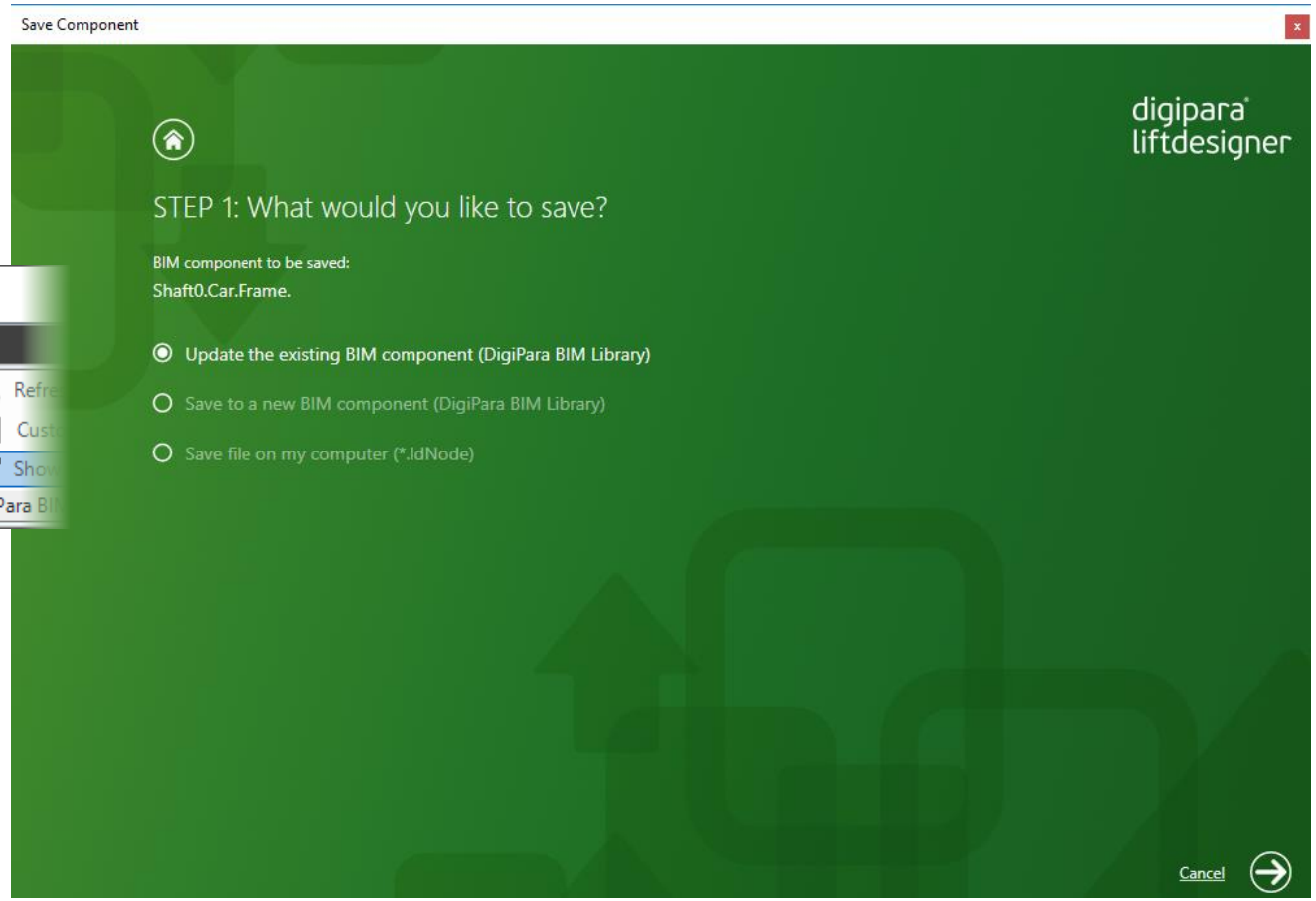
Save into the DigiPara BIM Library

Save into the DigiPara BIM Library

Save the finished defined BIM Component

- into the DigiPara BIM Library





Modify the 3D Geometry

Modify the 3D Geometry

PL2.1 TYPICAL PROCESSES

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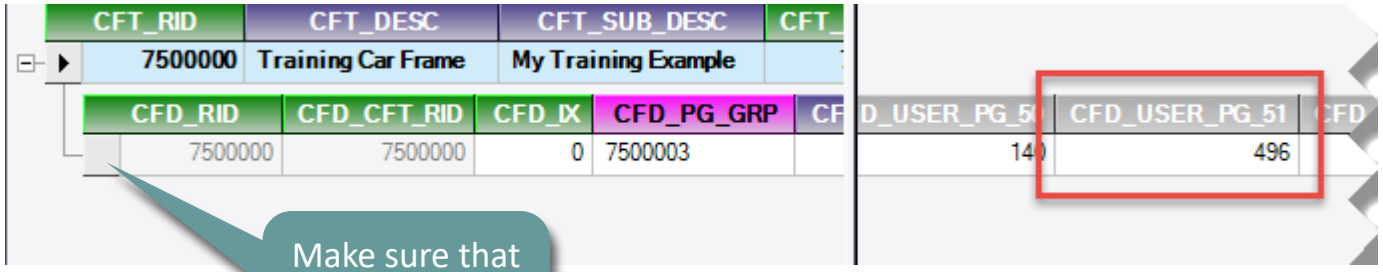
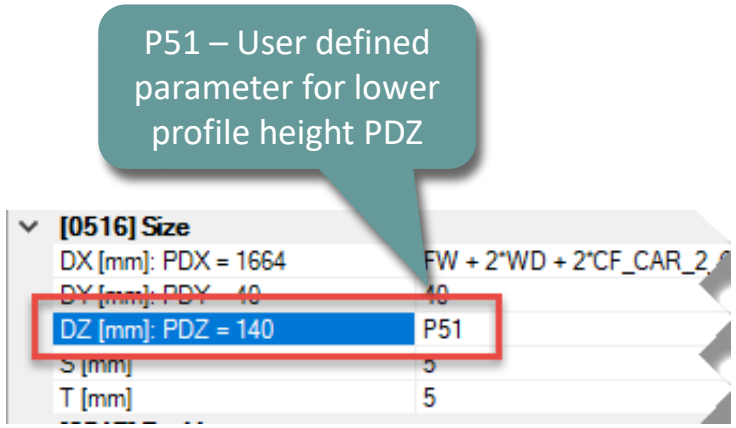
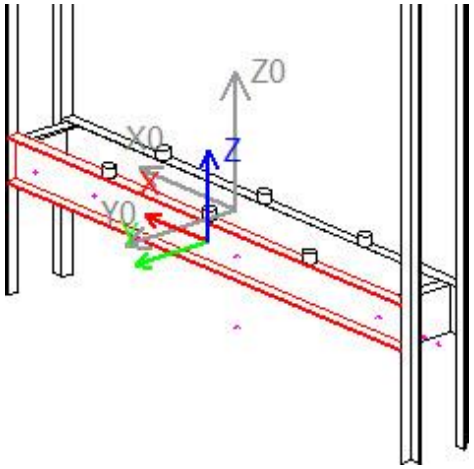
Customize user defined 3D Parameter

- in DigiPara Liftdesigner Datamanager







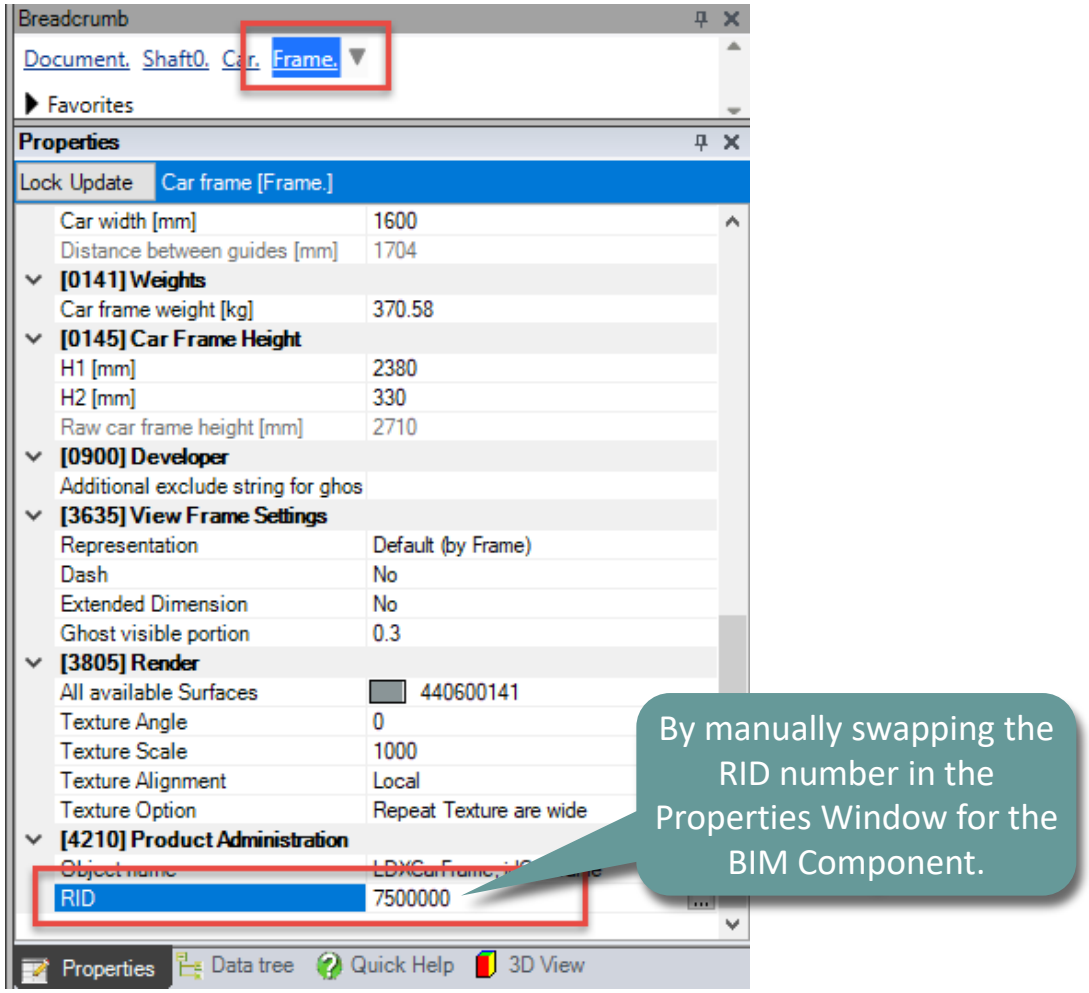
Modify the 3D Geometry

digipara® liftdesigner

Reload the modified BIM Component

- in DigiPara Liftdesigner

Reload your BIM Component to accept edited values from the DigiPara Liftdesigner Datamanager.



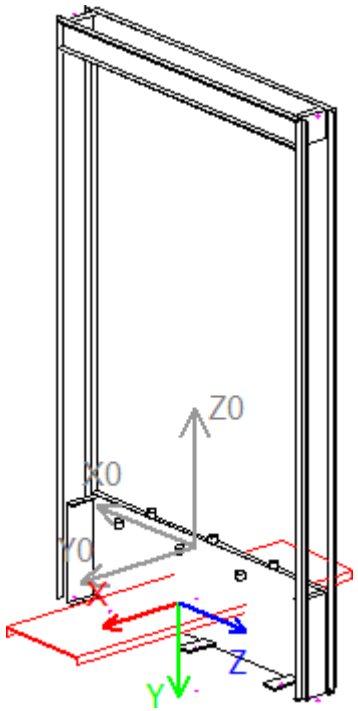
By manually swapping the RID number in the Properties Window for the BIM Component.

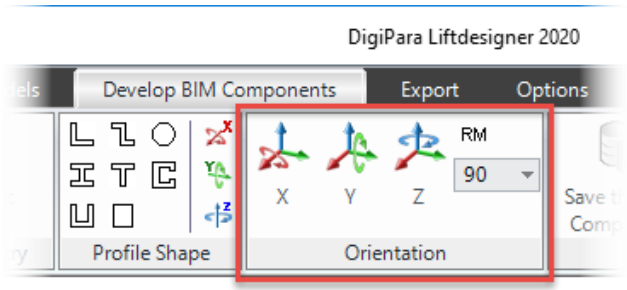
Modify the 3D Geometry

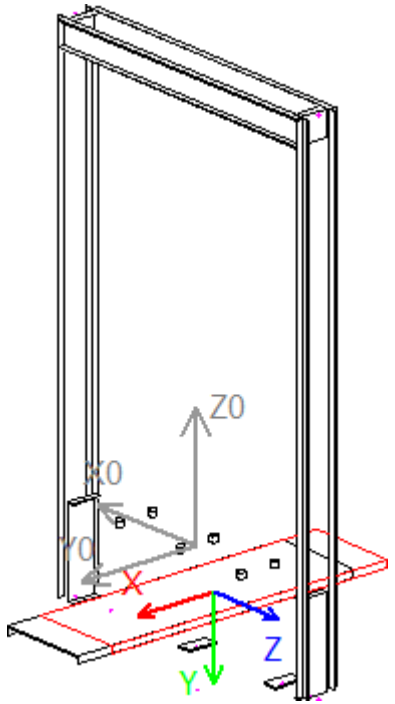
PL2.1 TYPICAL PROCESSES

Customize existing Profiles - Position

- under the Develop BIM Components tab





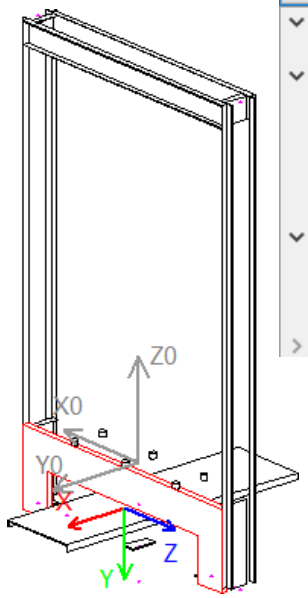


Modify the 3D Geometry

PL2.1 TYPICAL PROCESSES

Customize existing Profiles – Size & Position

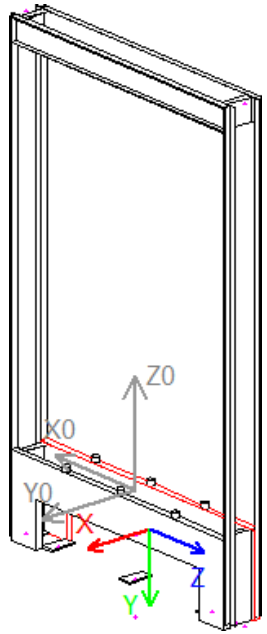
- via the Properties Window in DigiPara Liftdesigner



Properties

Lock Update | Profile 4 [Profile4.]

[0515] Type	
Shape	U -Type
[0516] Size	
DX [mm]: PDX = 40	40
DY [mm]: PDY = 496	P51
DZ [mm]: PDZ = 1664	FW + 2*WD + 2*CF_CAR_2_GUIDES - 40
S [mm]	215
T [mm]	198
[0517] Position	
X0 [mm] = 0	0
Y0 [mm] = 100	100
Z0 [mm] = -248	-0.5*PDY
[0519] Options	



Properties

Lock Update | Profile 5 [Profile5.]

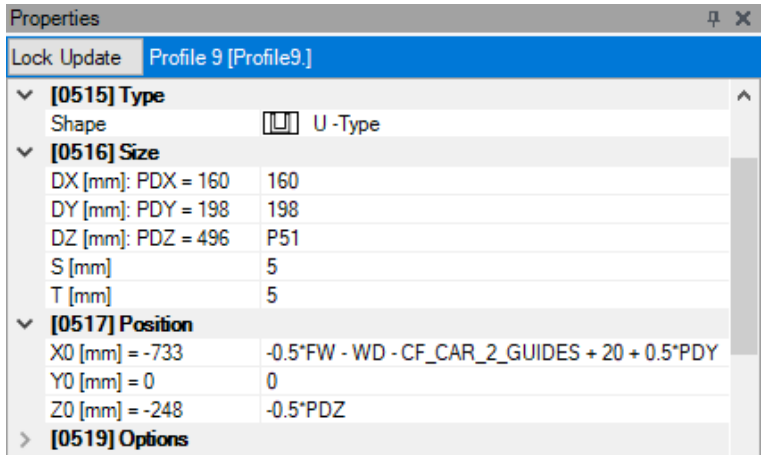
[0515] Type	
Shape	U -Type
[0516] Size	
DX [mm]: PDX = 40	40
DY [mm]: PDY = 496	P51
DZ [mm]: PDZ = 1664	FW + 2*WD + 2*CF_CAR_2_GUIDES - 40
S [mm]	215
T [mm]	198
[0517] Position	
X0 [mm] = 0	0
Y0 [mm] = -100	-100
Z0 [mm] = -248	-0.5*PDY
[0519] Options	

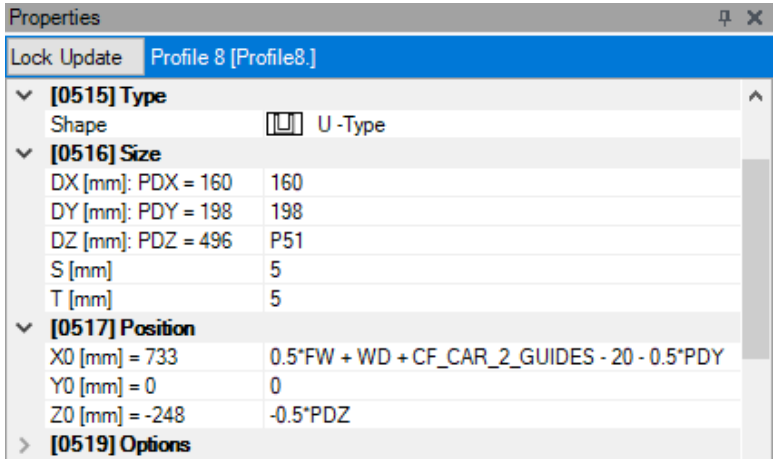
Modify the 3D Geometry

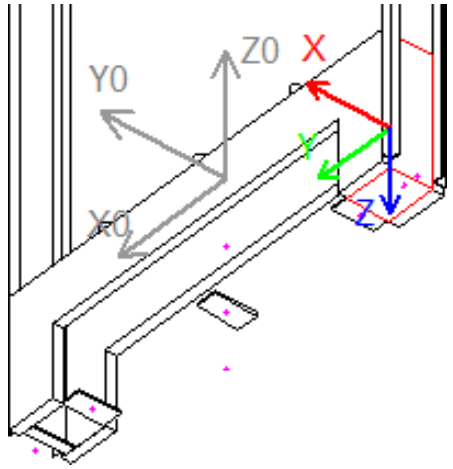
digipara® liftdesigner

Customize existing Profiles – Size & Position

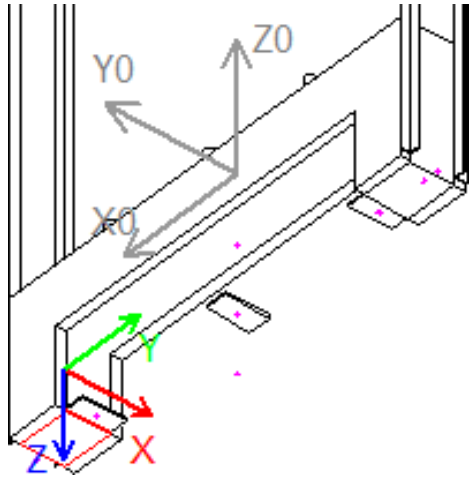
- via the Properties Window in DigiPara Liftdesigner







Copy formulas and values from one profile to another.

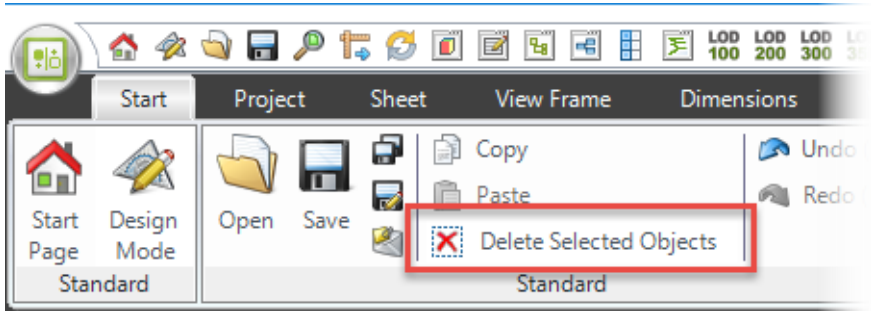


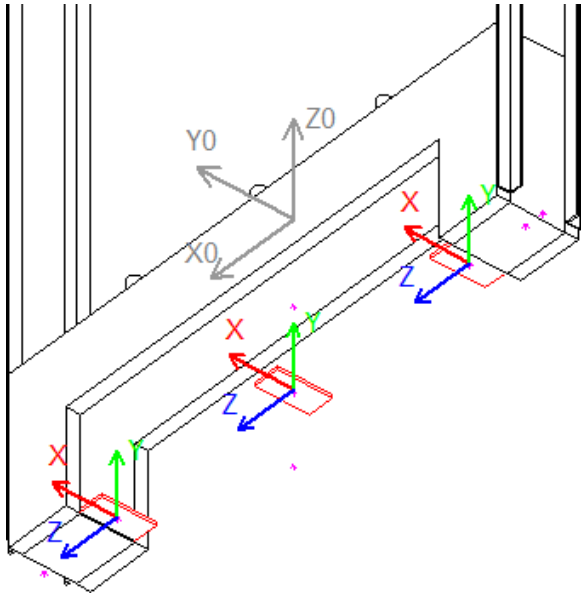
Modify the 3D Geometry

PL2.1 TYPICAL PROCESSES

Delete uneeded Profiles

- in DigiPara Liftdesigner



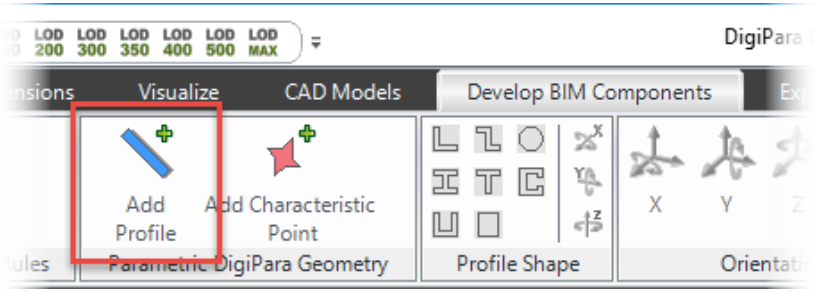


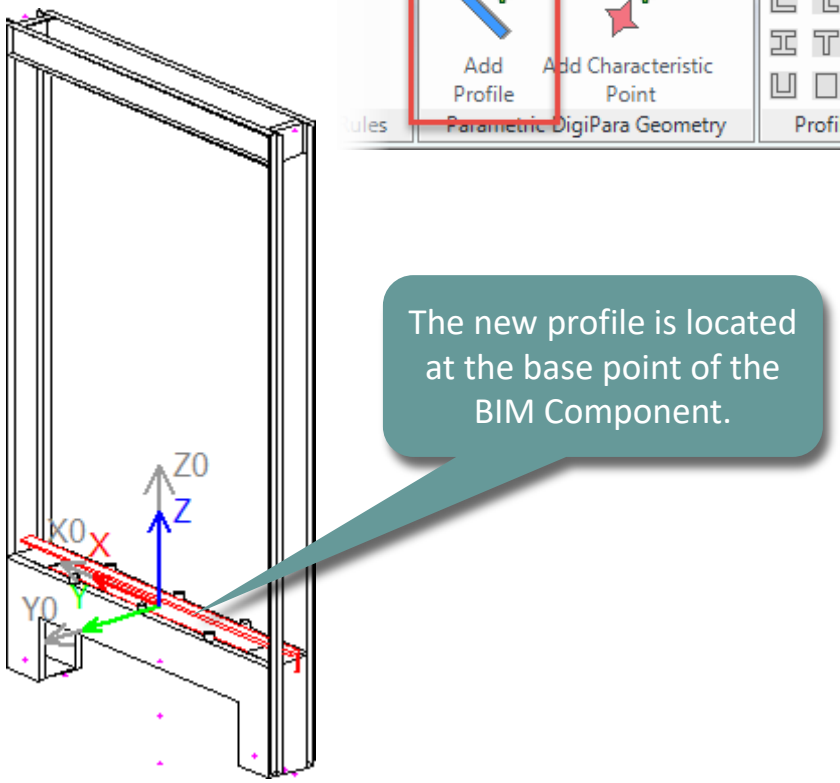
Modify the 3D Geometry

PL2.1 TYPICAL PROCESSES

Add new Profiles to your BIM Component

- in DigiPara Liftdesigner (Developer Work Area)



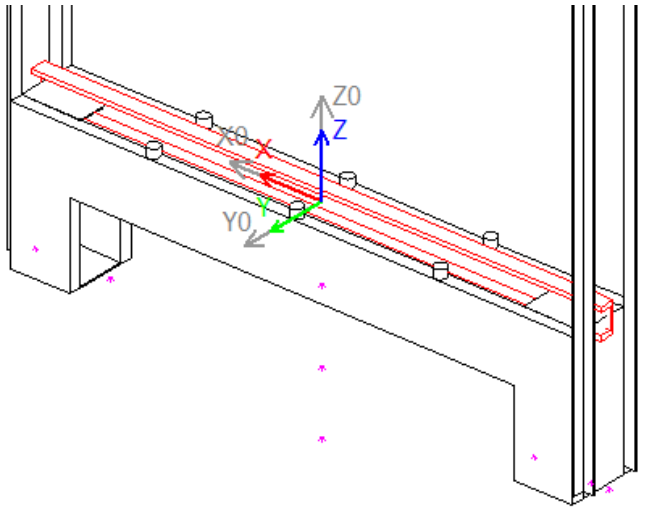


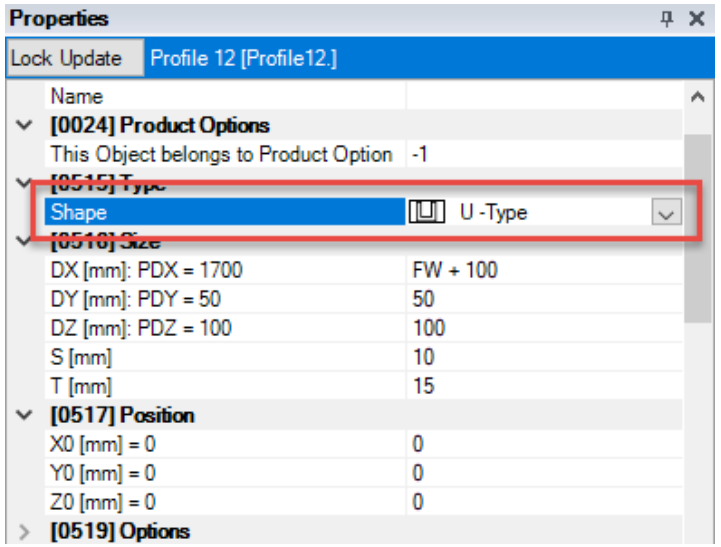
The new profile is located at the base point of the BIM Component.

Modify the 3D Geometry

Customize new Profiles – Type

- via the Properties Window in DigiPara Liftdesigner



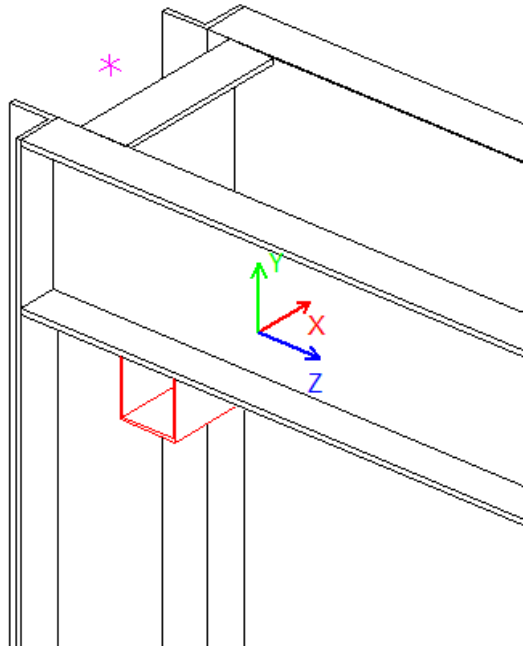


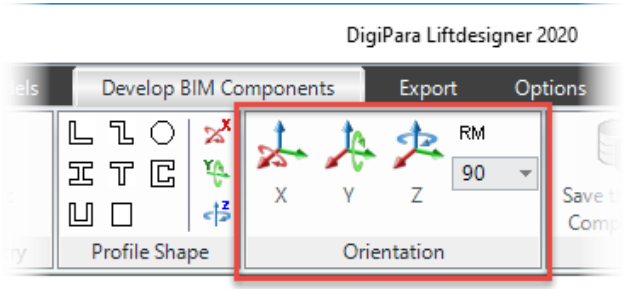
Modify the 3D Geometry

PL2.1 TYPICAL PROCESSES

Customize new Profiles – Orientation, Size & Position

- in DigiPara Liftdesigner

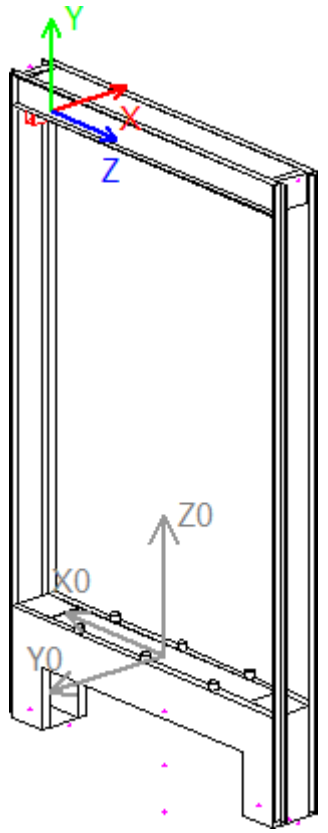




Properties

Lock Update | Profile 12 [Profile12.]

[0515] Type	
Shape	U -Type
[0516] Size	
DX [mm]: PDX = 240	240
DY [mm]: PDY = 50	50
DZ [mm]: PDZ = 50	50
S [mm]	2
T [mm]	2
[0517] Position	
X0 [mm] = 718	0.5*FW - 134 + WD + CF_CAR_2_GUIDES
Y0 [mm] = 0	0
Z0 [mm] = 2215	CFD_HB - P50 - 0.5*PDY
[0519] Options	

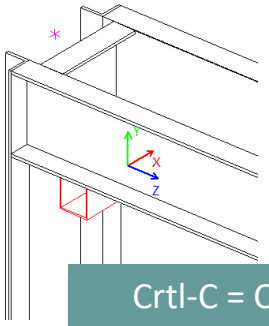


Modify the 3D Geometry

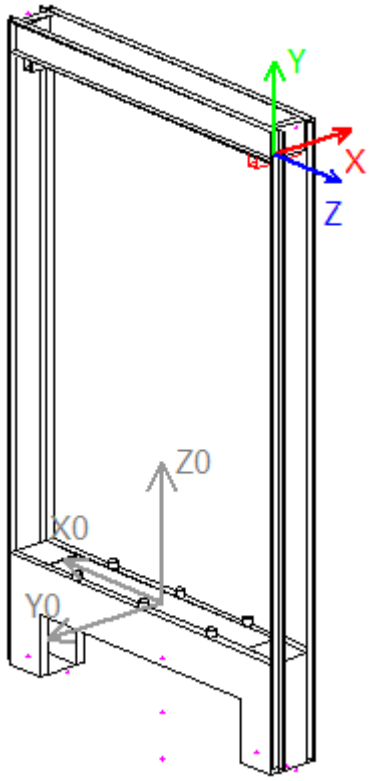
digipara® liftdesigner

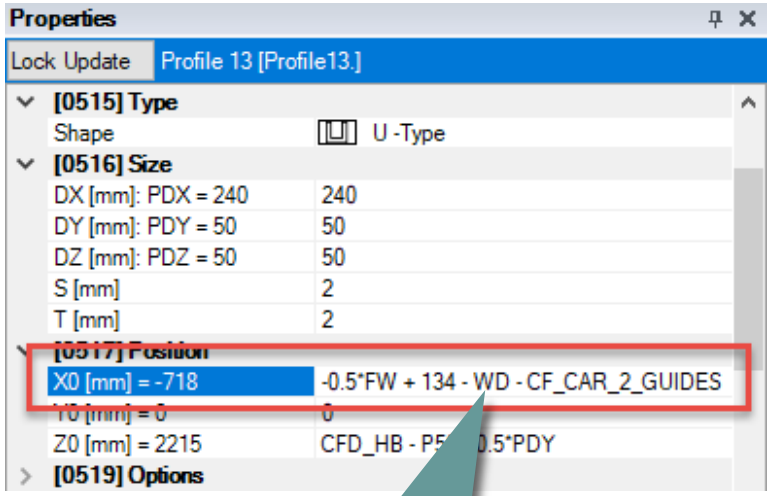
Copy existing Profiles and reverse the signs

- via the Properties Window in DigiPara Liftdesigner



Crtl-C = Copy
Crtl-V = Paste





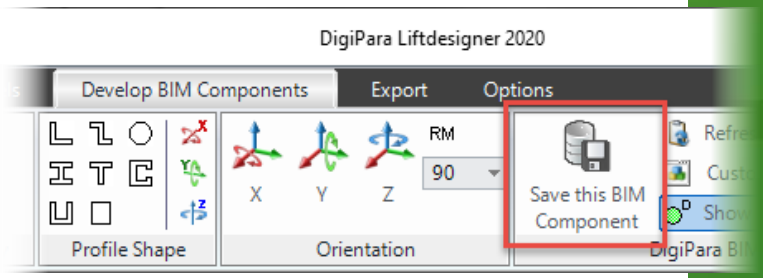
Repositioning by reversing the signs in an existing formula.

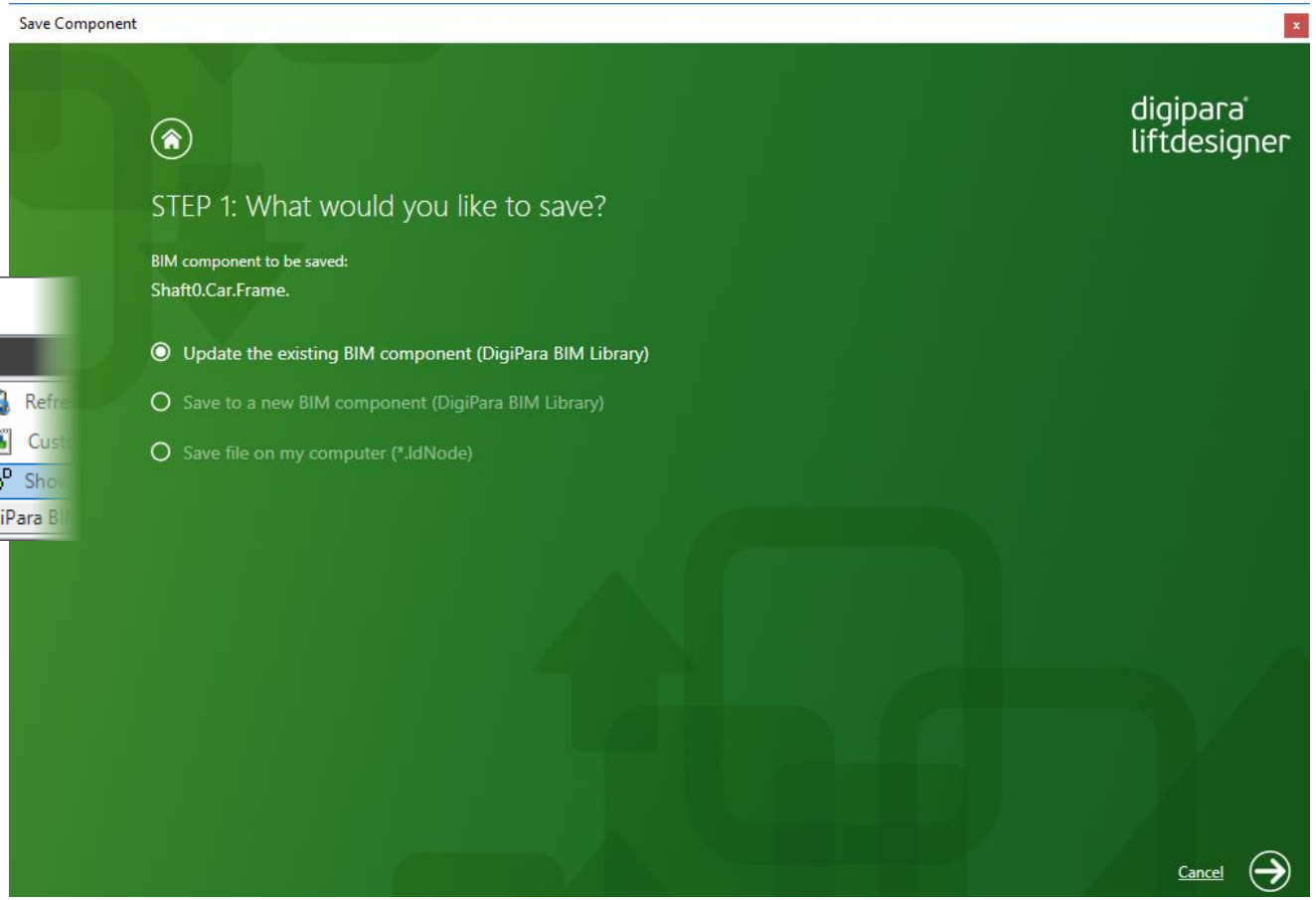
Save into the DigiPara BIM Library

Save into the DigiPara BIM Library

Save the finished defined BIM Component

- into the DigiPara BIM Library





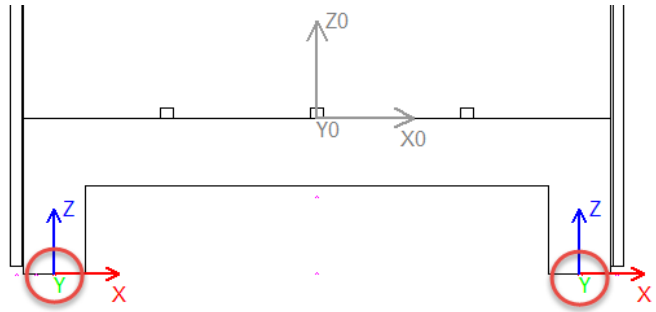
Set the Positioning Points

Set the Positioning Points

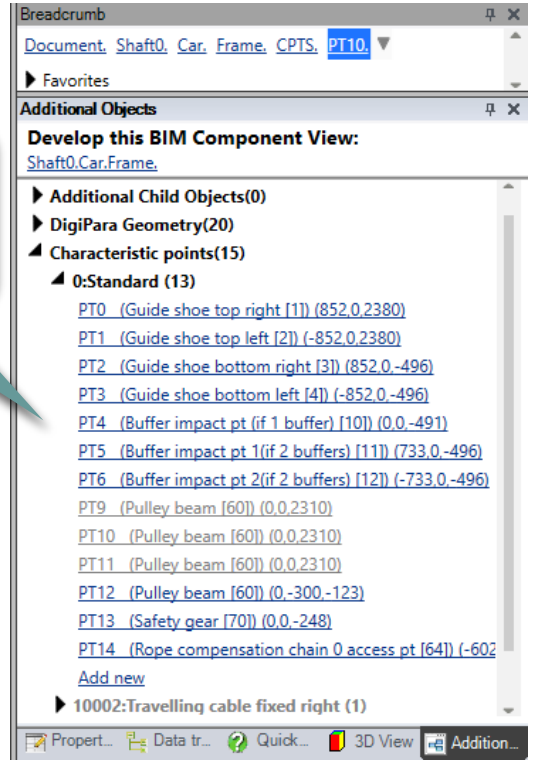
PL2.1 TYPICAL PROCESSES

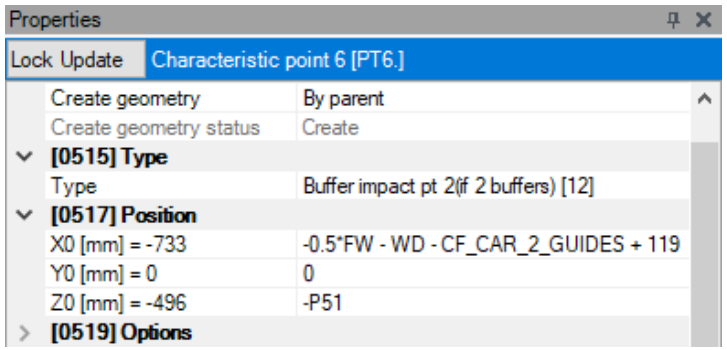
Set the Positioning Points: Buffer

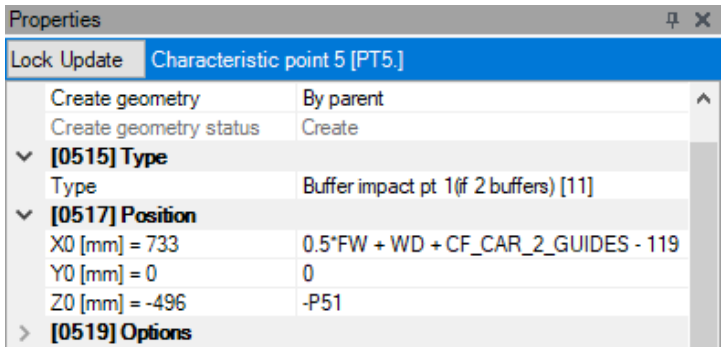
- in DigiPara Liftdesigner



Overview of the available points for this BIM Component.







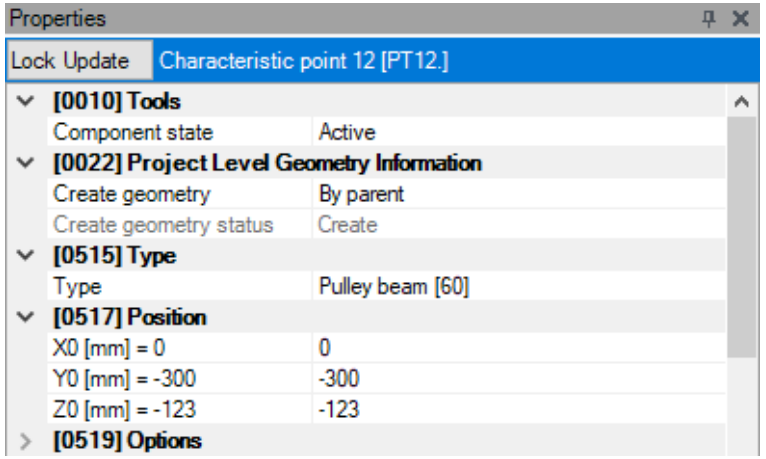
Set the Positioning Points

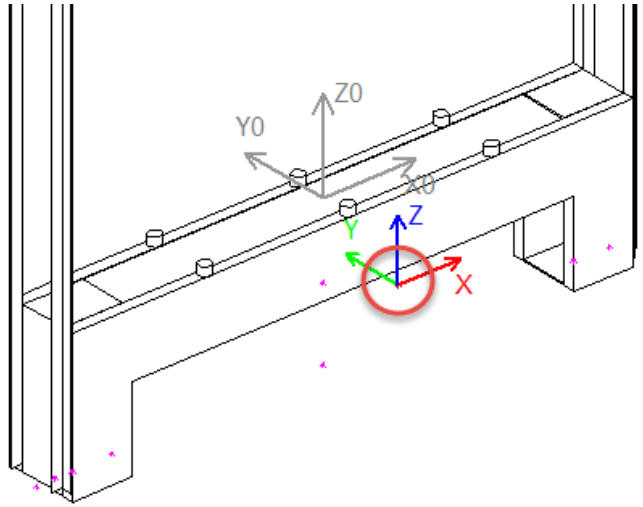
digipara® liftdesigner

Set the Positioning Points: Pulley Beam

- in DigiPara Liftdesigner

- In general note the positioning points for:
  - Guide shoes
  - Buffer
  - Safety gear
  - Pulley beam
  - Traveling cable
  - Suspension-Rope access
  - Piston access
  - Rope compensation



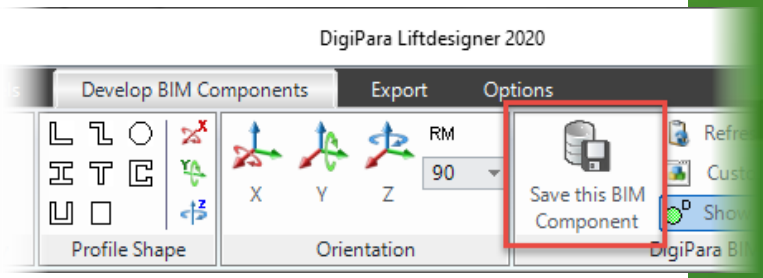


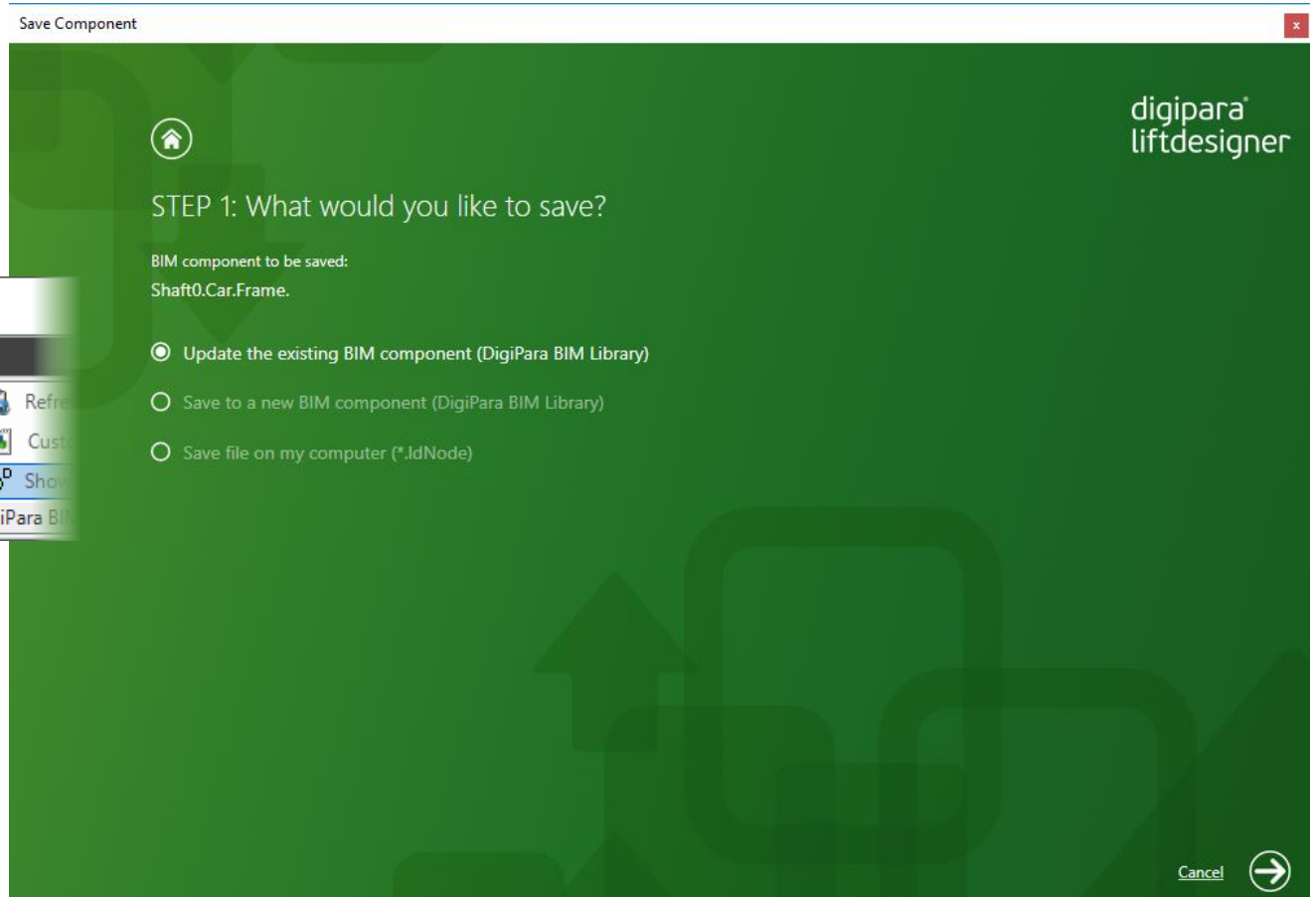
Save into the DigiPara BIM Library

Save into the DigiPara BIM Library

Save the finished defined BIM Component

- into the DigiPara BIM Library





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Let's have a break!

digipara® liftdesigner

PL2.2

Optional Steps

Car Frame and Accessories

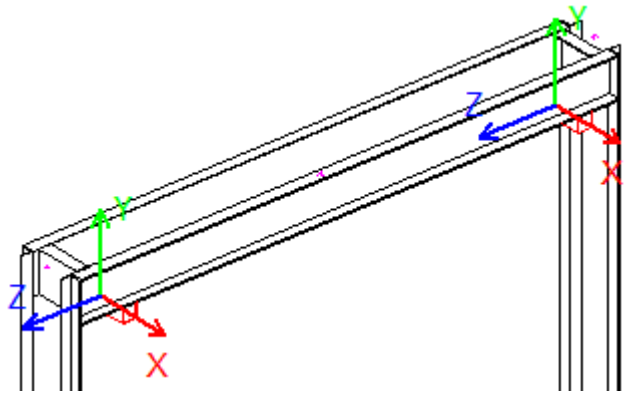
Dynamic Properties

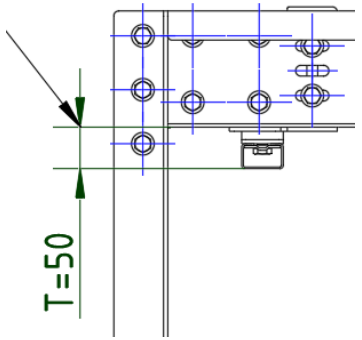
Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Expected result:

- Adjustable profile heights



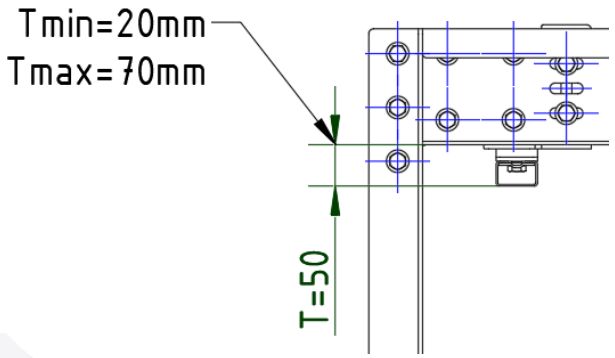


Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Preparation Steps: Create a user defined 3D Parameter

- in DigiPara Liftdesigner Datamanager



CFT_RID	CFT_DESC	CFT_SUB_DESC	CFT_
7500000	Training Car Frame	My Training Example	

CFD_RID	CFD_CFT_RID	CFD_IX	CFD_PG_GRP	CF	SER_PG_5	CFD_USER_PG_52	CFD_I
7500000	7500000	0	7500003		49	50	

Edit Mode!

Using a empty and undefined gray user column.

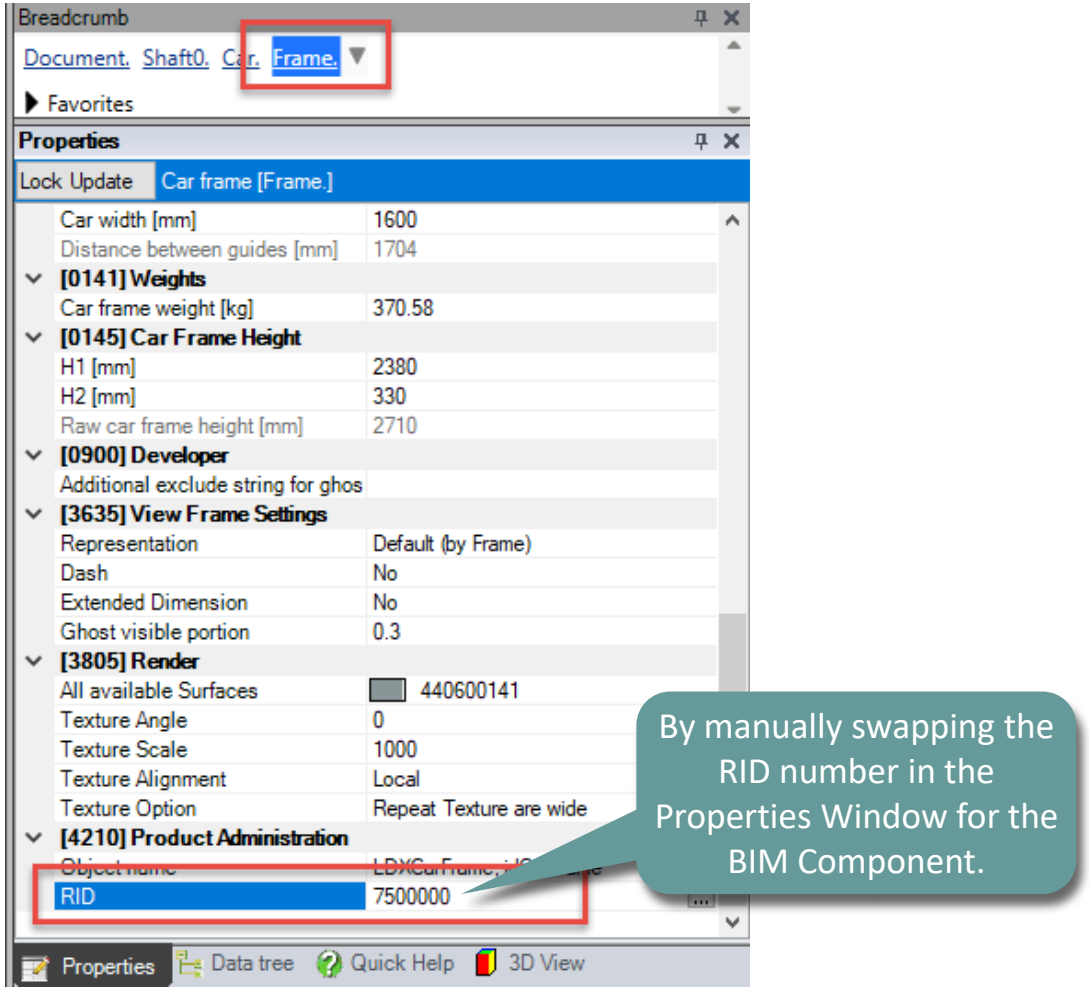
Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Reload the modified BIM Component

- in DigiPara Liftdesigner

Reload your BIM Component to accept edited values from the DigiPara Liftdesigner Datamanager.



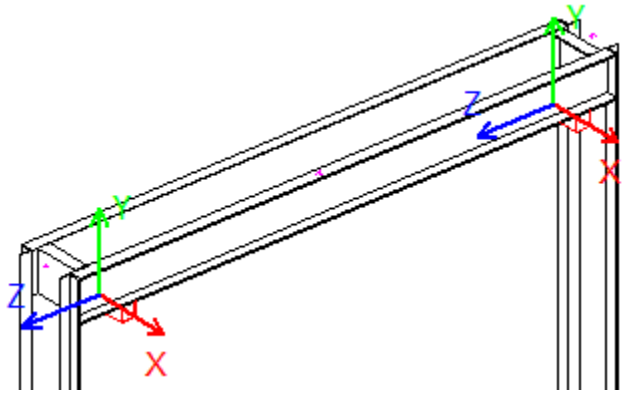
By manually swapping the RID number in the Properties Window for the BIM Component.

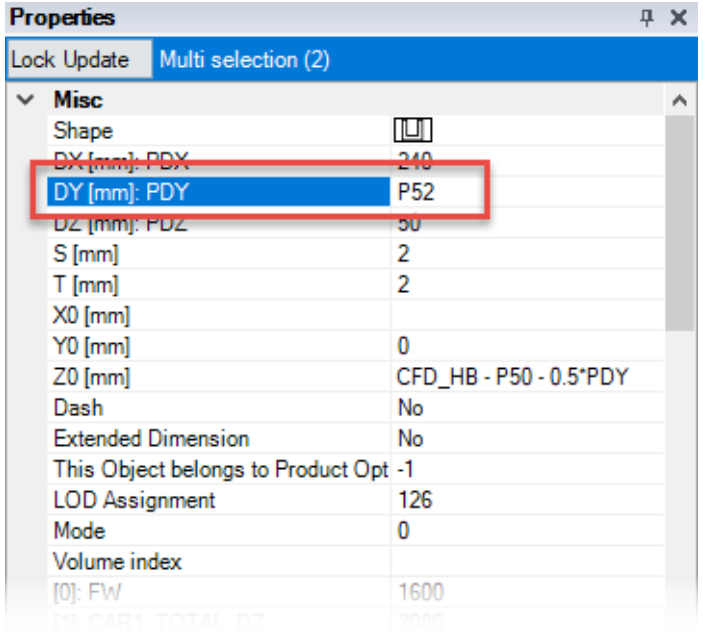
Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Assignment of the new user defined 3D Parameter to the Profile

- in DigiPara Liftdesigner





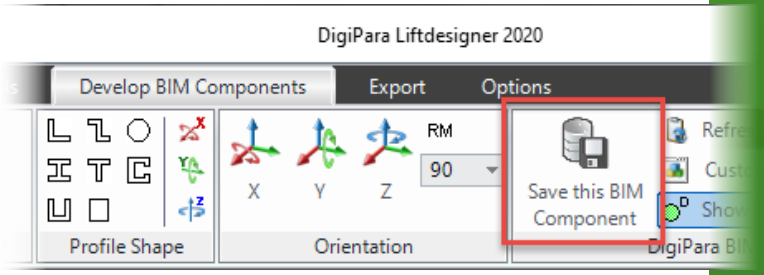
The newly created 3D Parameter is included in the Properties Window now.

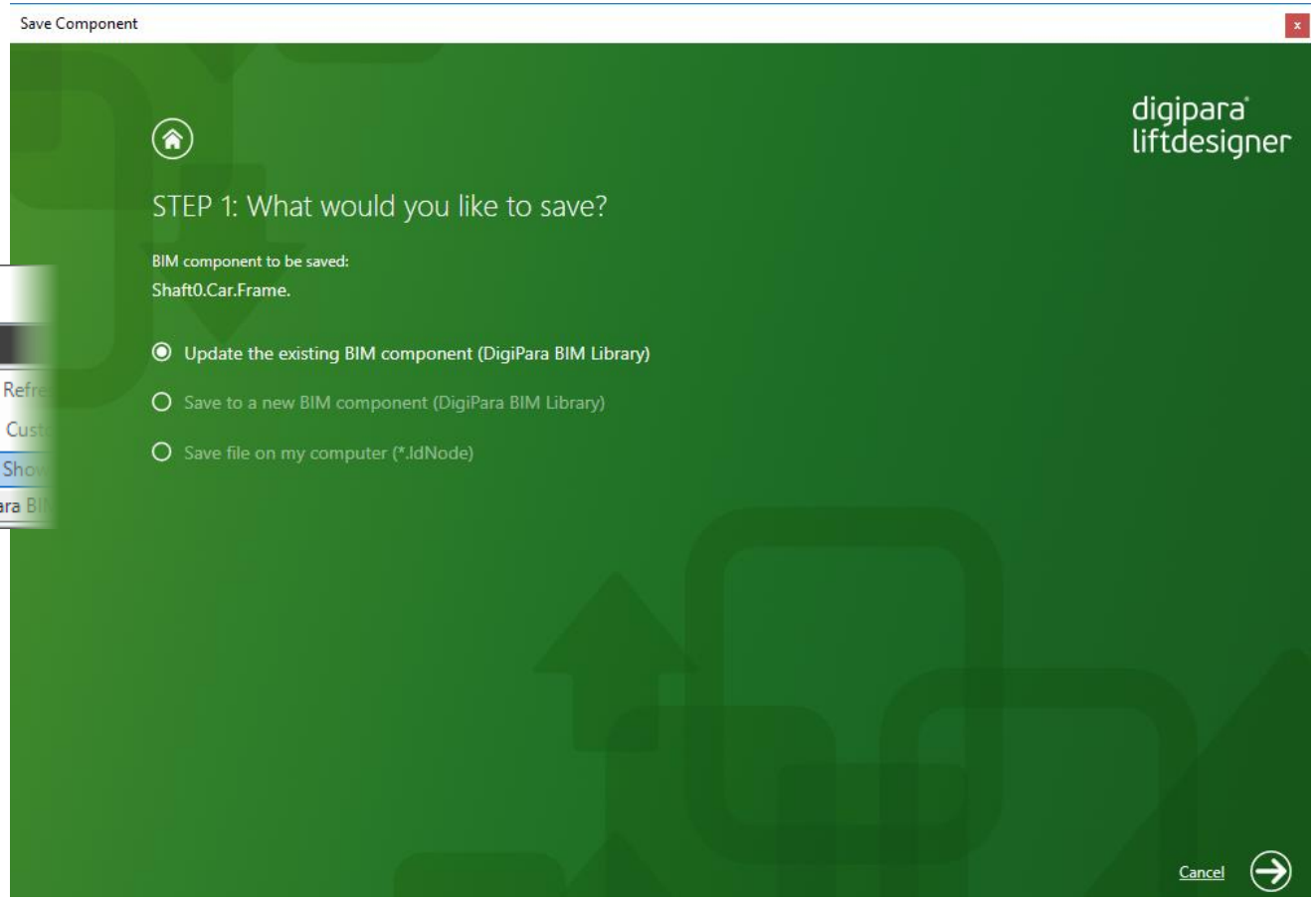
Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Save the finished defined BIM Component

- into the DigiPara BIM Library



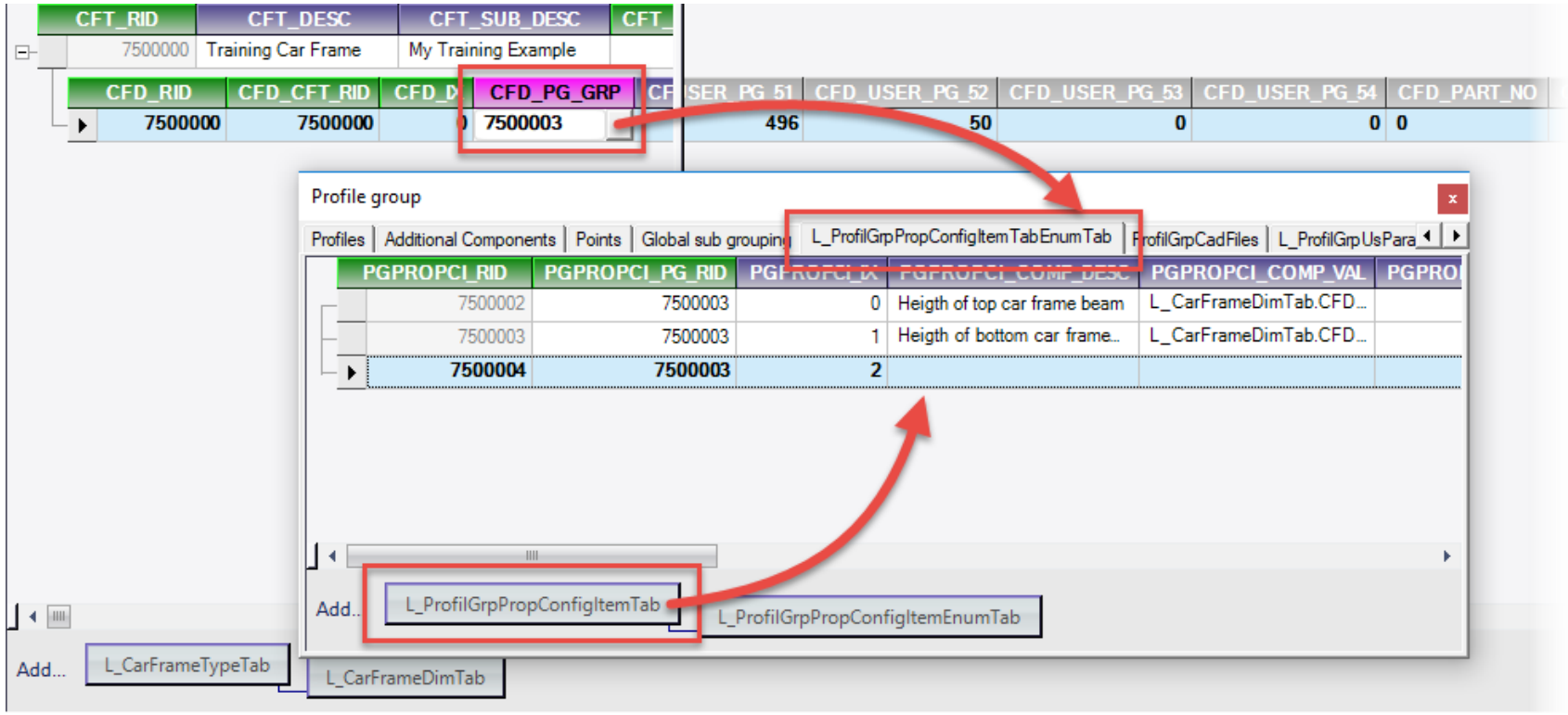


Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Create a dynamic Property

- using the associated Profile Group in DigiPara Liftdesigner Datamanager

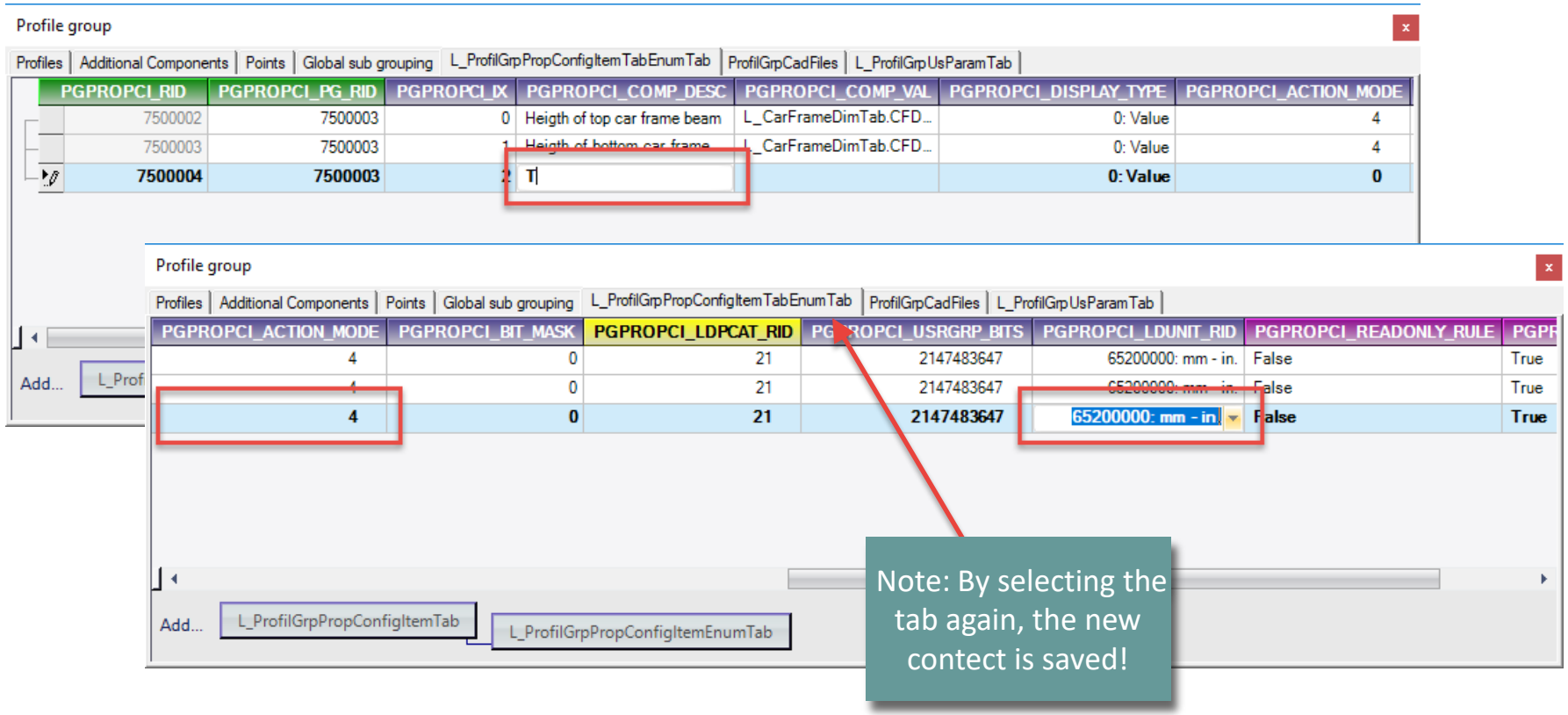


Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Define a dynamic Property

- using the associated Profile Group in DigiPara Liftdesigner Datamanager

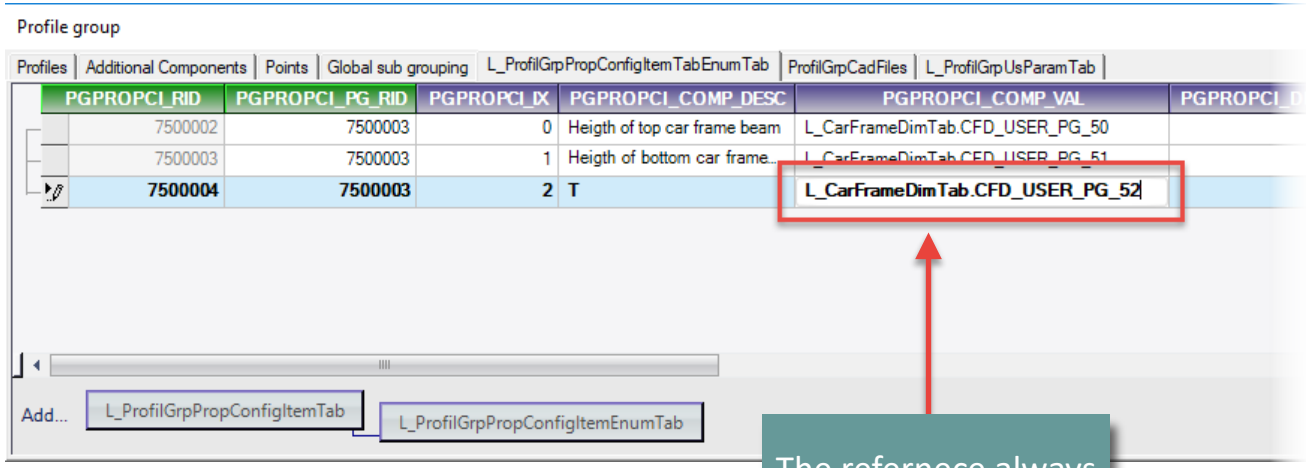


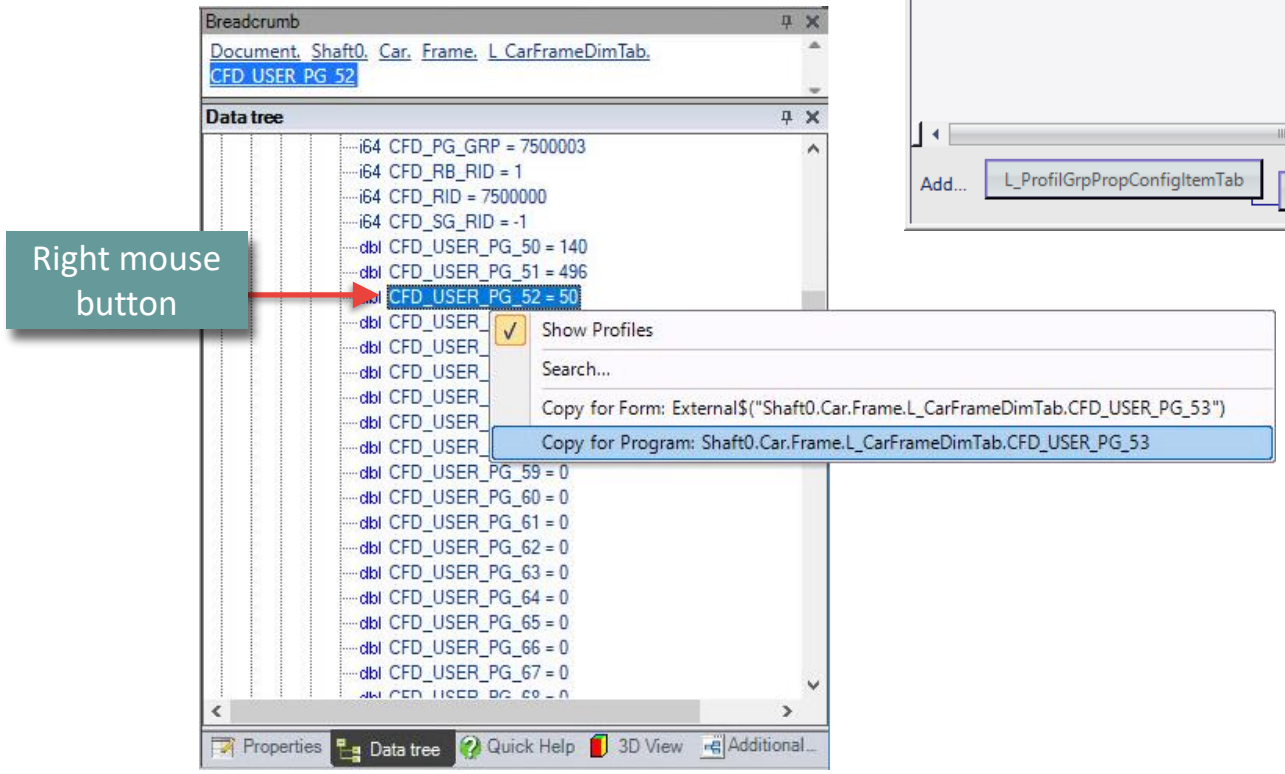
Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Define a dynamic Property

- By copying the reference / 3D Parameter from the DigiPara Liftdesigner Date tree



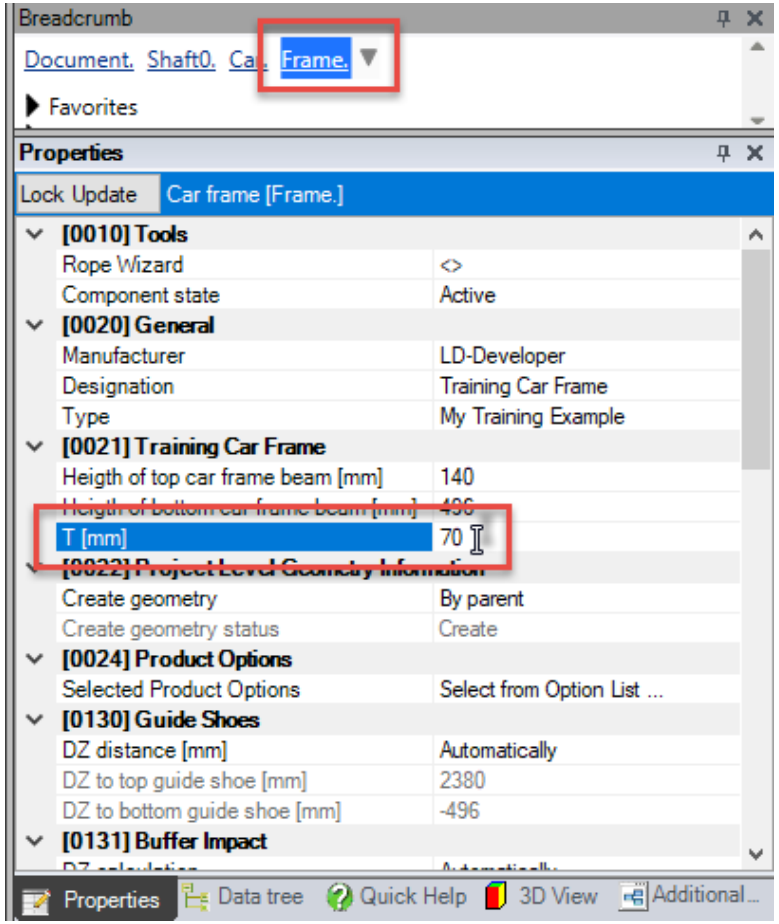


Dynamic Properties

PL2.2 OPTIONAL STEPS - DYNAMIC PROPERTIES

Check the new defined dynamic Property

- in DigiPara Liftdesigner

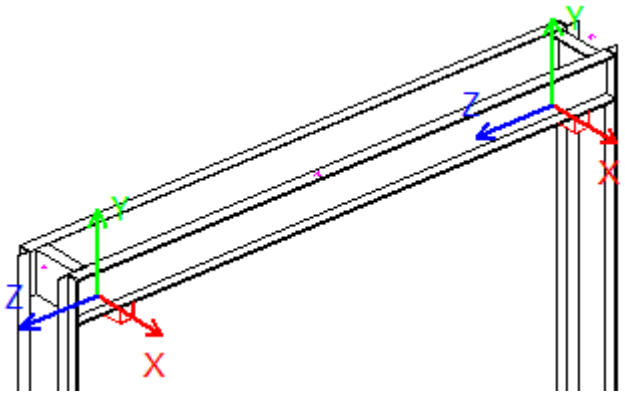


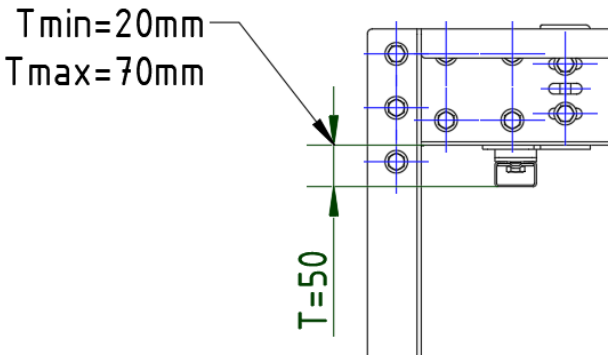
Dynamic BIM Component Rules

Dynamic BIM Component Rules

Expected result:

- Fix range of possible values



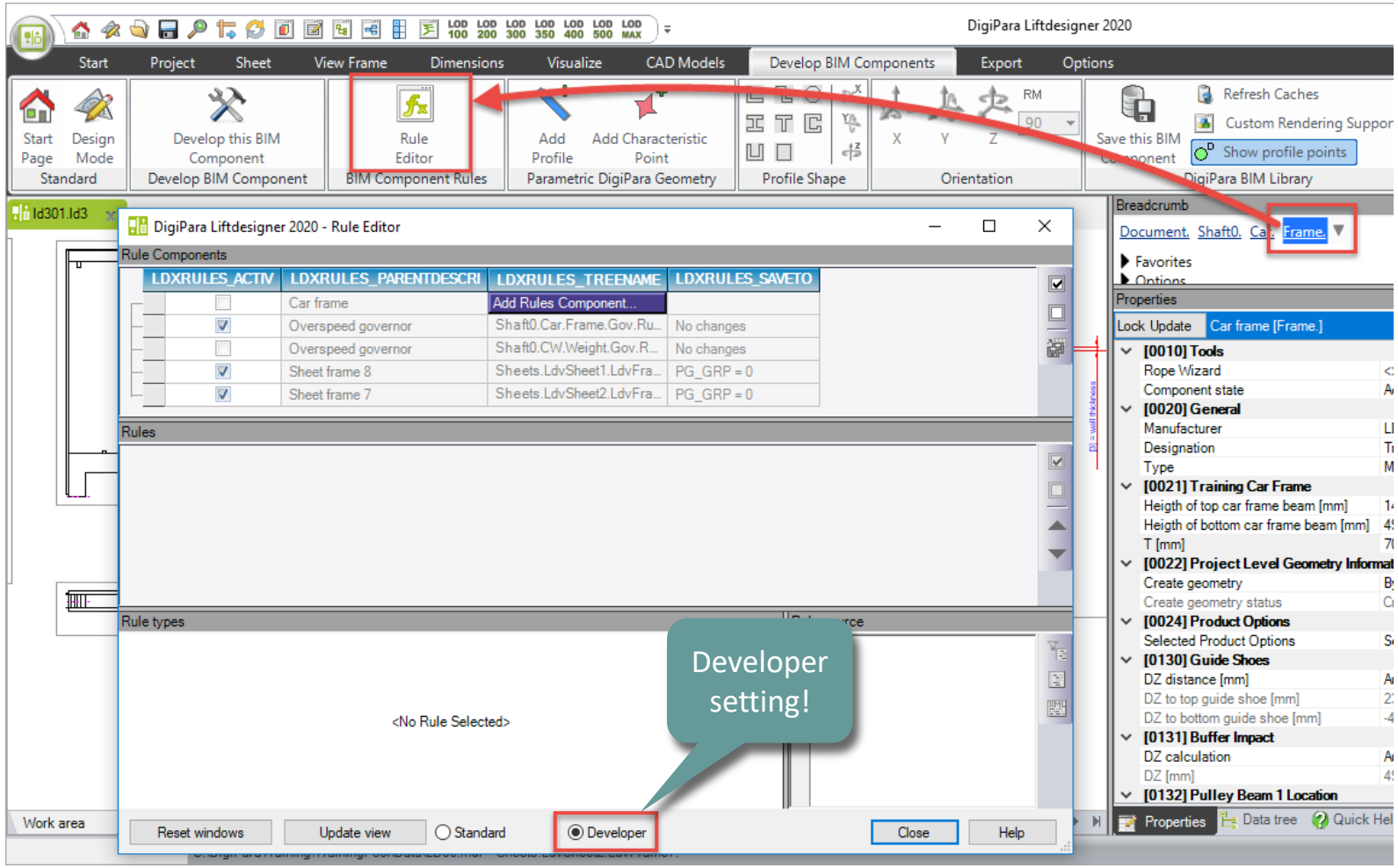


Dynamic BIM Component Rules

PL2.2 OPTIONAL STEPS - DYNAMIC BIM COMPONENT RULES

Add dynamic BIM Component Rules

- in DigiPara Liftdesigner Rule Editor

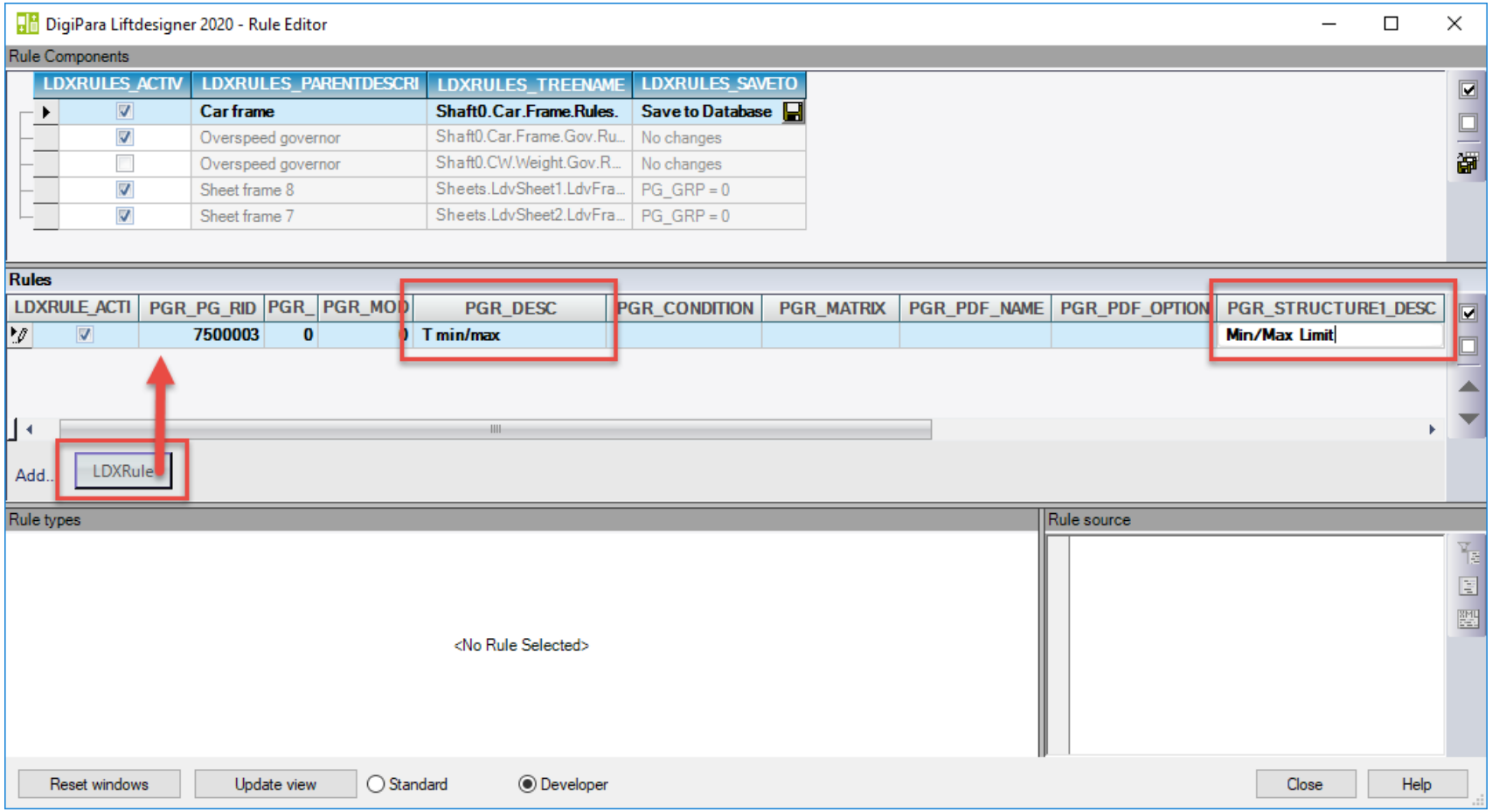


Dynamic BIM Component Rules

digipara® liftdesigner

Define dynamic Rules: Description and Tree Structure

- in DigiPara Liftdesigner Rule Editor

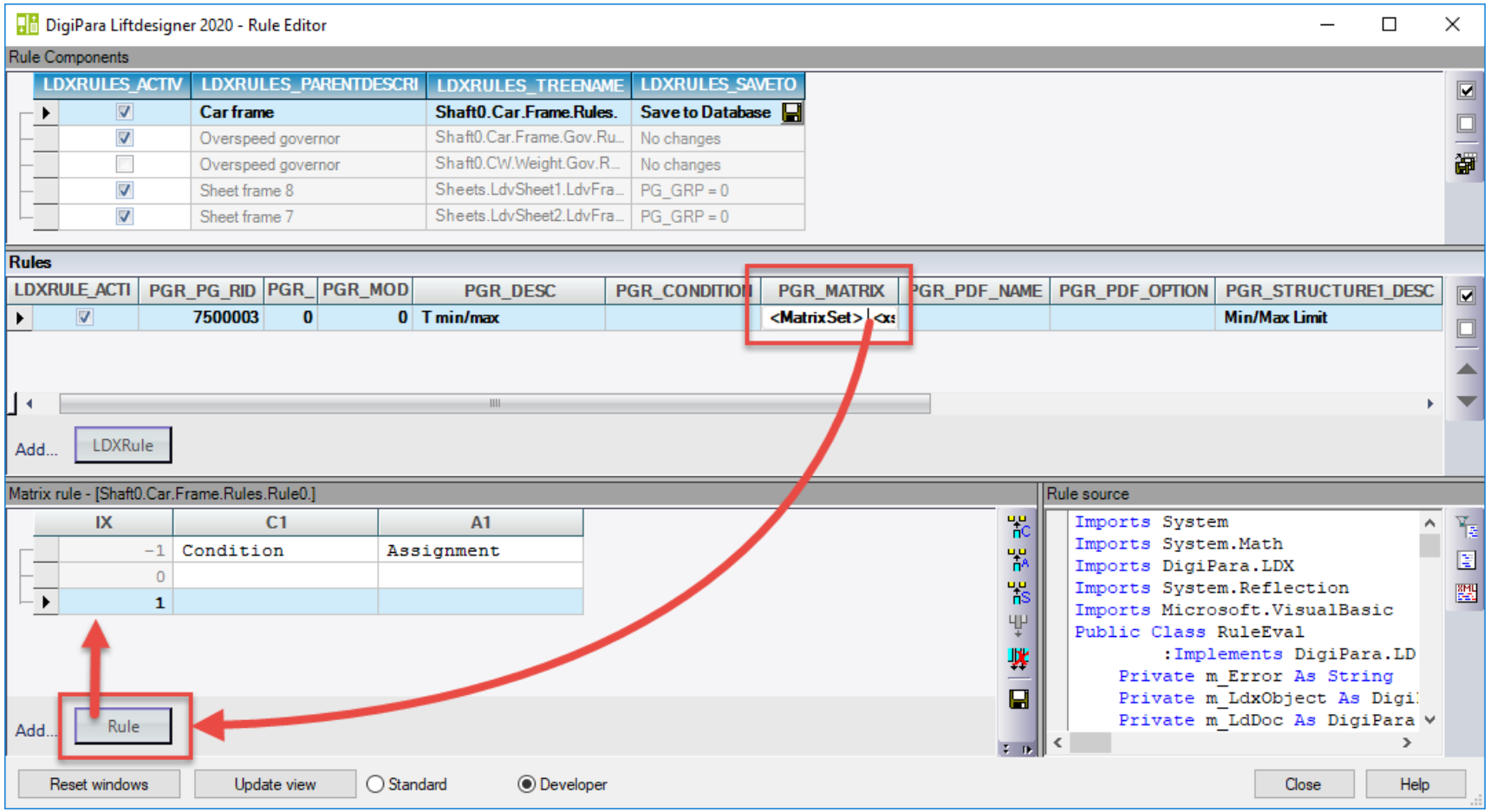


Dynamic BIM Component Rules

PL2.2 OPTIONAL STEPS - DYNAMIC BIM COMPONENT RULES

Define dynamic Rules: Condition and Assignment

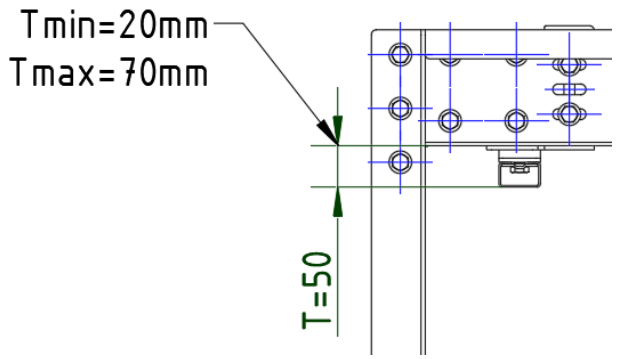
- in DigiPara Liftdesigner Rule Editor



Dynamic BIM Component Rules

Define dynamic Rules: Condition and Assignment

- in DigiPara Liftdesigner Rule Editor



Matrix rule - [Shaft0.Car.Frame.Rules.Rule0.]

IX	C1	A1
-1	LD("Me.L CarFrameDimTab.CFD USER PG 52")	Me.L CarFrameDimTab.CFD USER PG 52
0	<20	20
1	>70	70

Add... Rule

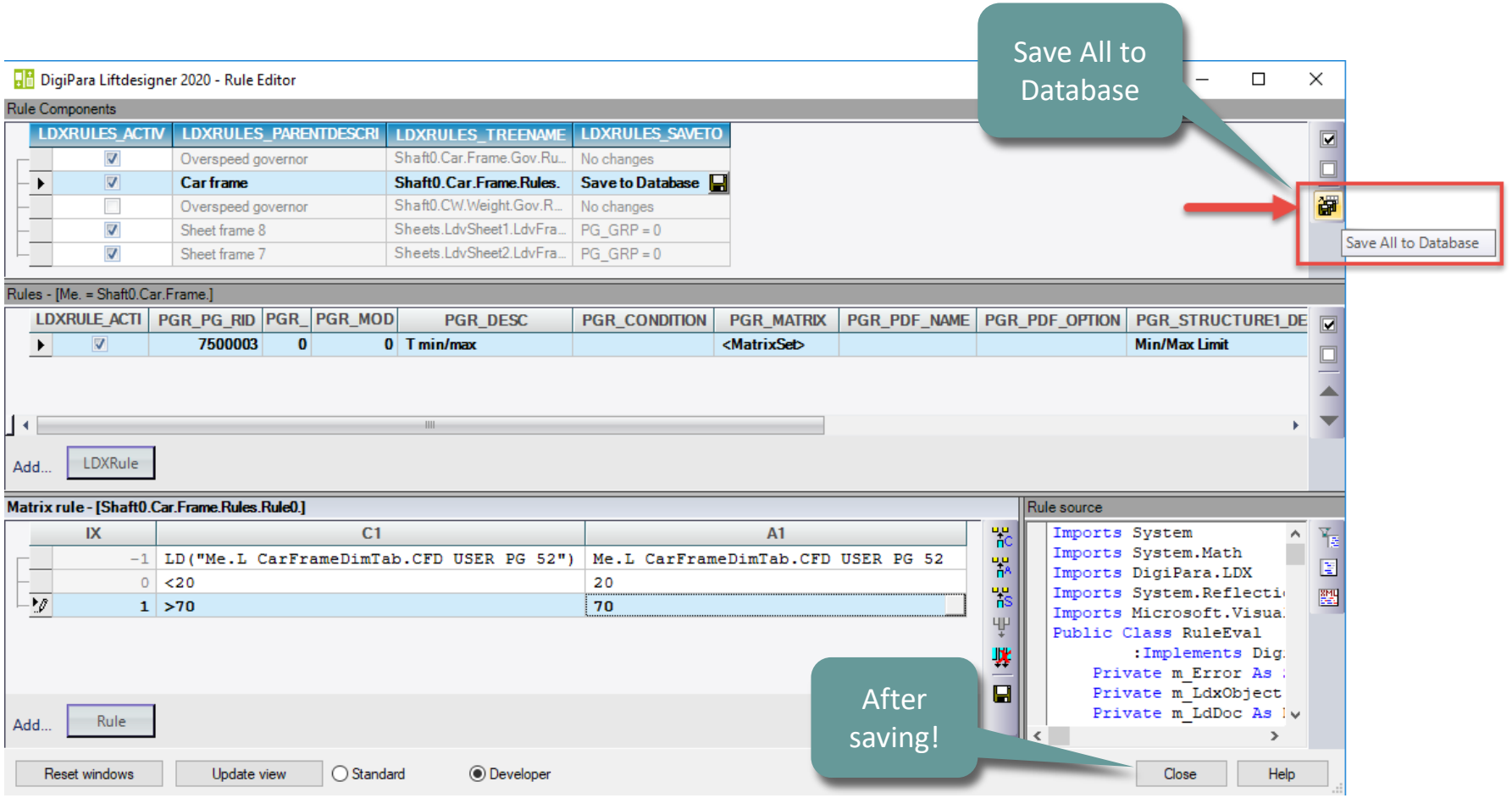
Dynamic BIM Component Rules

PL2.2 OPTIONAL STEPS - DYNAMIC BIM COMPONENT RULES

digipara® liftdesigner

Save your new dynamic Rule

- in DigiPara Liftdesigner Rule Editor

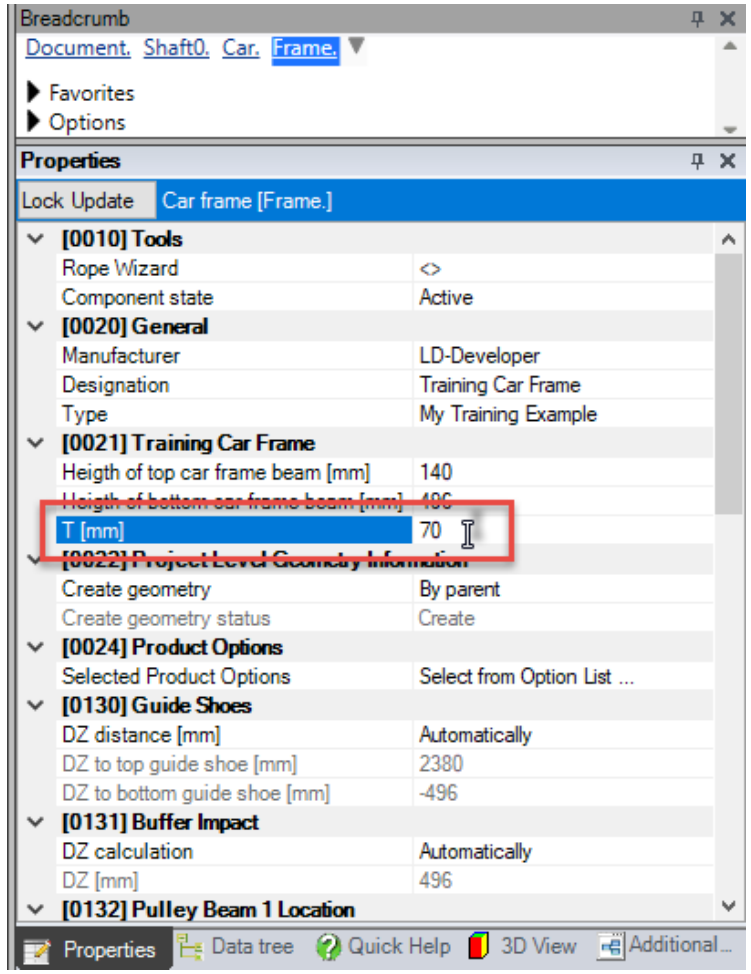


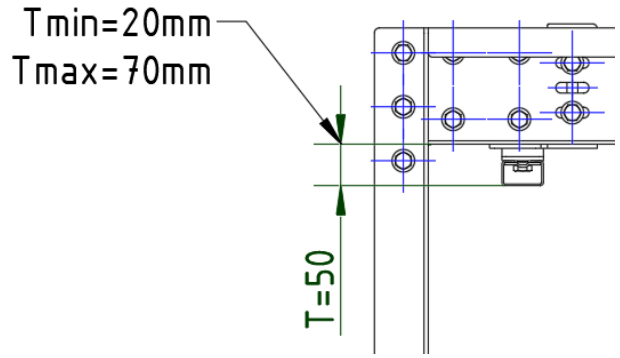
Dynamic BIM Component Rules

PL2.2 OPTIONAL STEPS - DYNAMIC BIM COMPONENT RULES

Testing the new dynamic Rule

- in DigiPara Liftdesigner

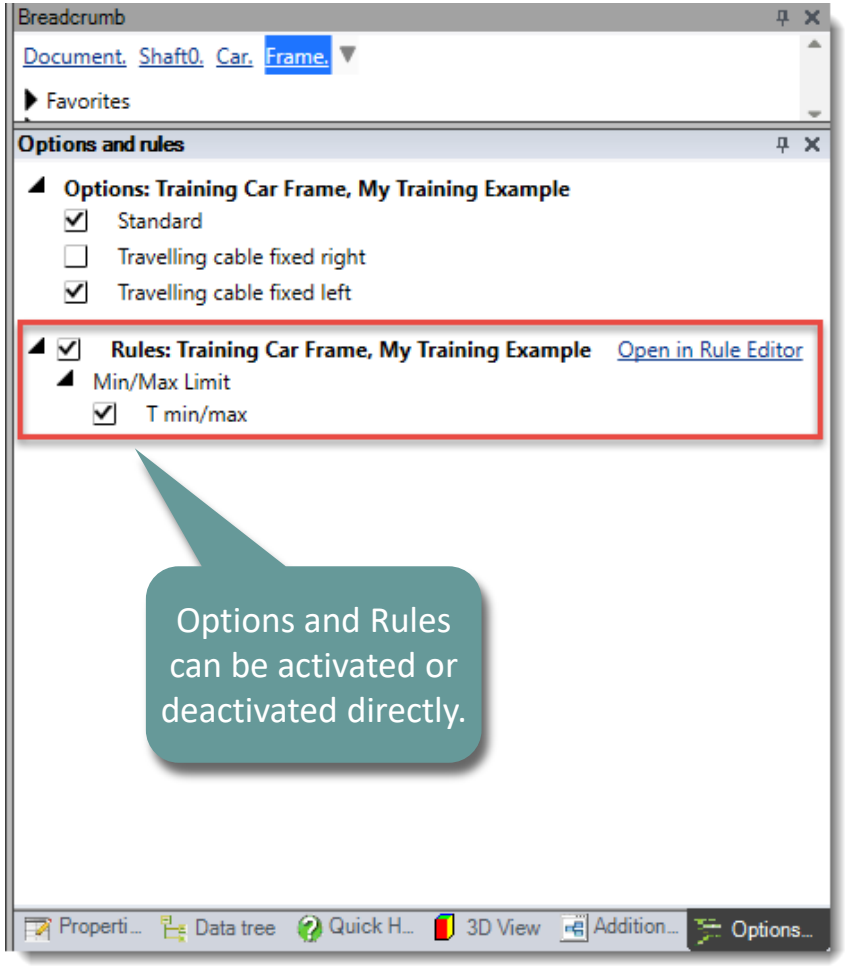




Dynamic BIM Component Rules

Options and Rules

- in DigiPara Liftdesigner



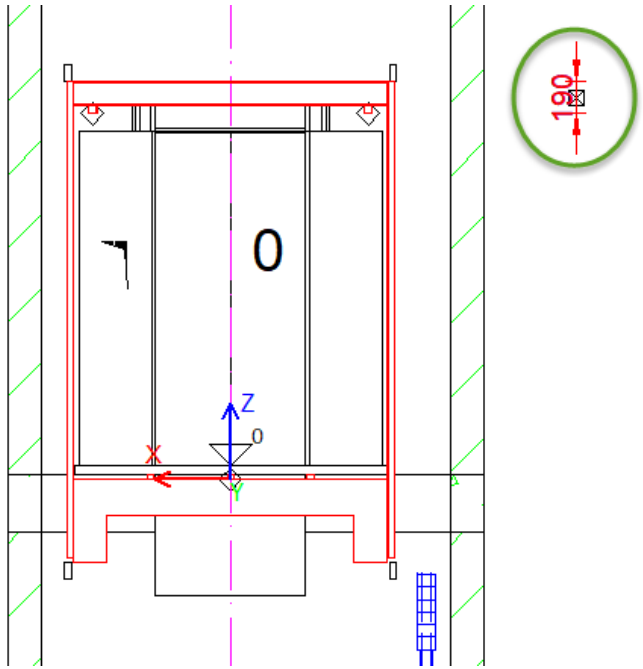
Dynamic Dimension Points

Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

Expected result:

- Characteristic Points for Dynamic Dimensions

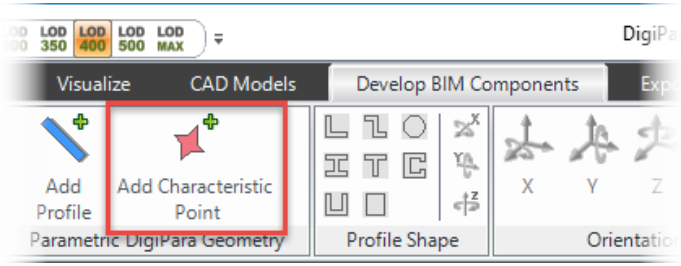


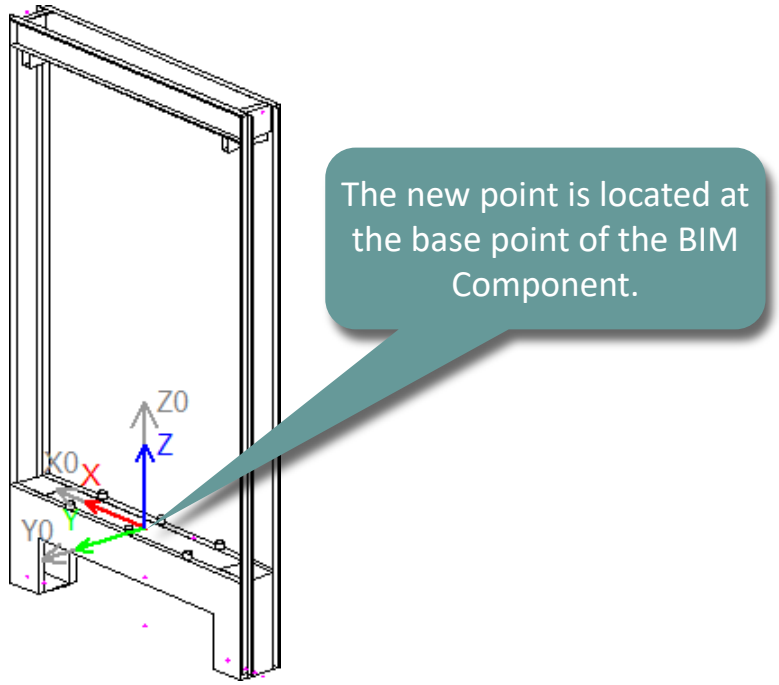
Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

Add additional Characteristic Points for own dynamic Dimensions

- in DigiPara Liftdesigner





Dynamic Dimension Points

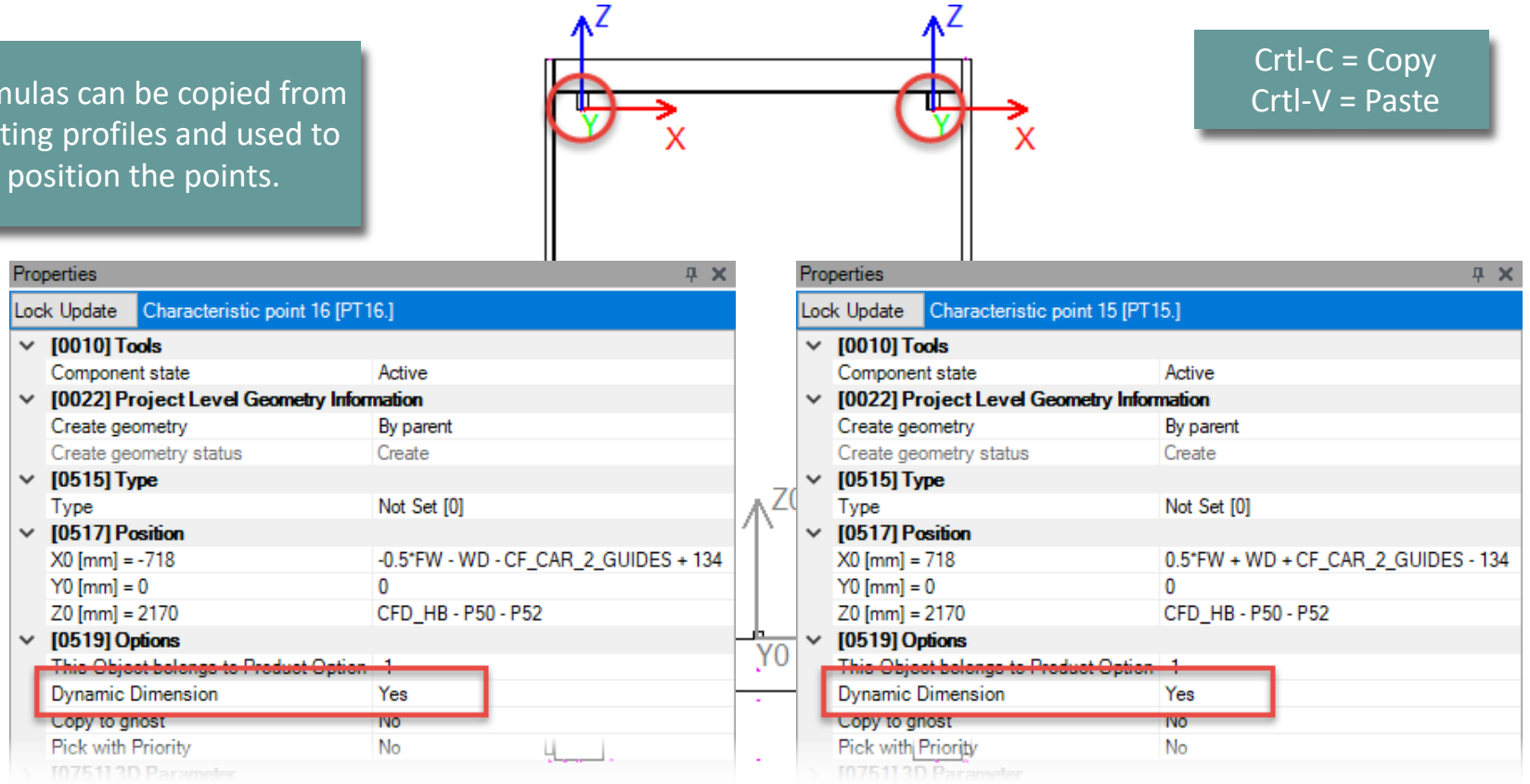
PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

Define dynamic Dimension Points: Position & Options

- in DigiPara Liftdesigner

Formulas can be copied from existing profiles and used to position the points.

Crtl-C = Copy
Crtl-V = Paste

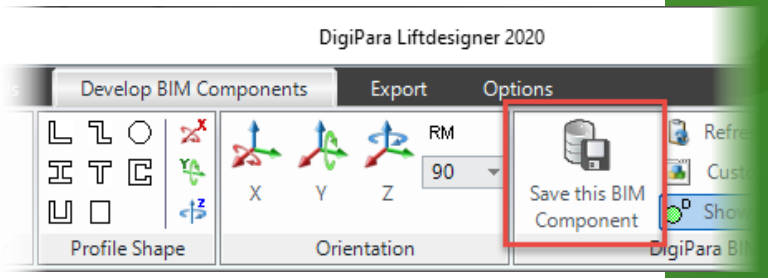


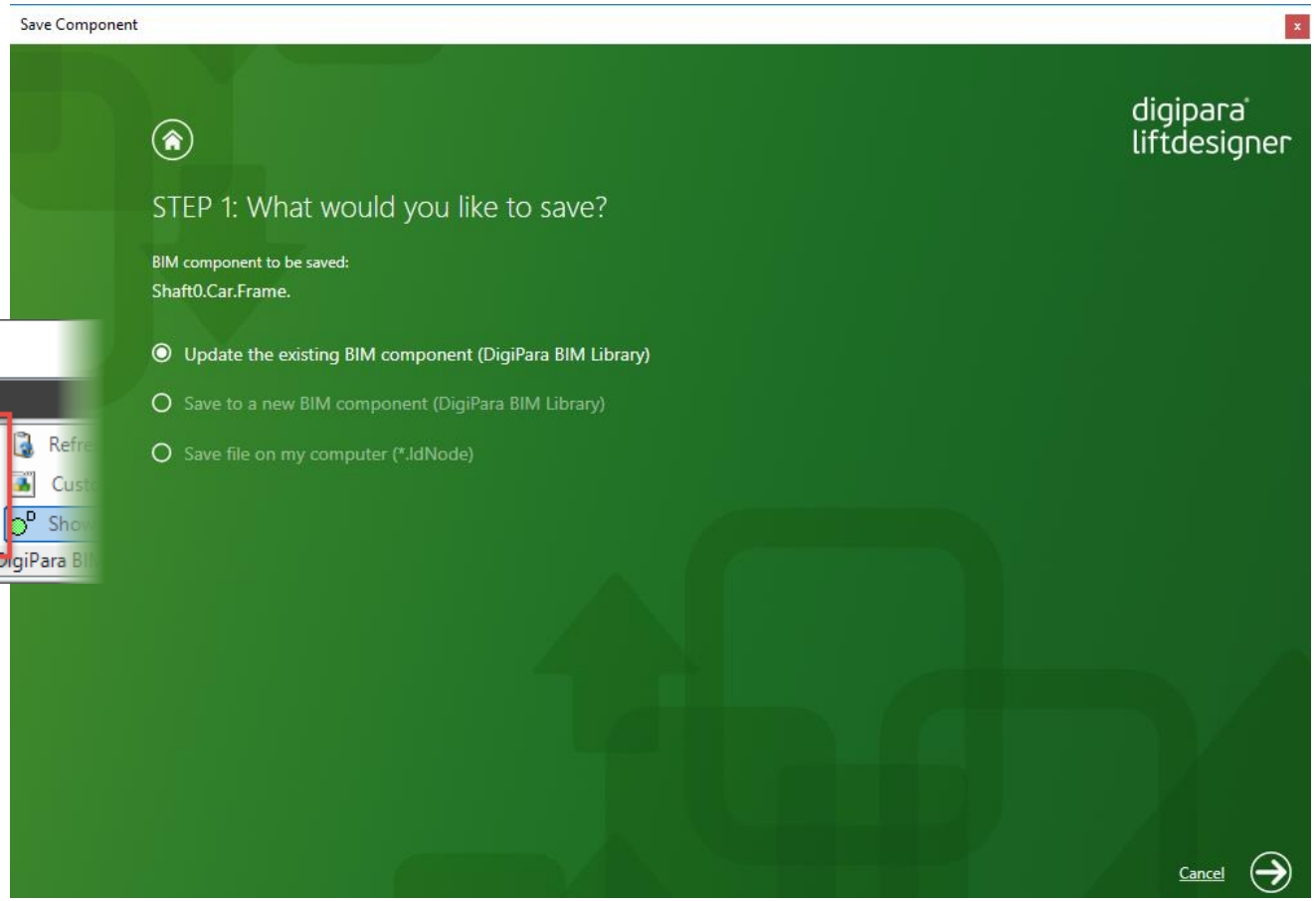
Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

Save the finished defined BIM Component

- into the DigiPara BIM Library





Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

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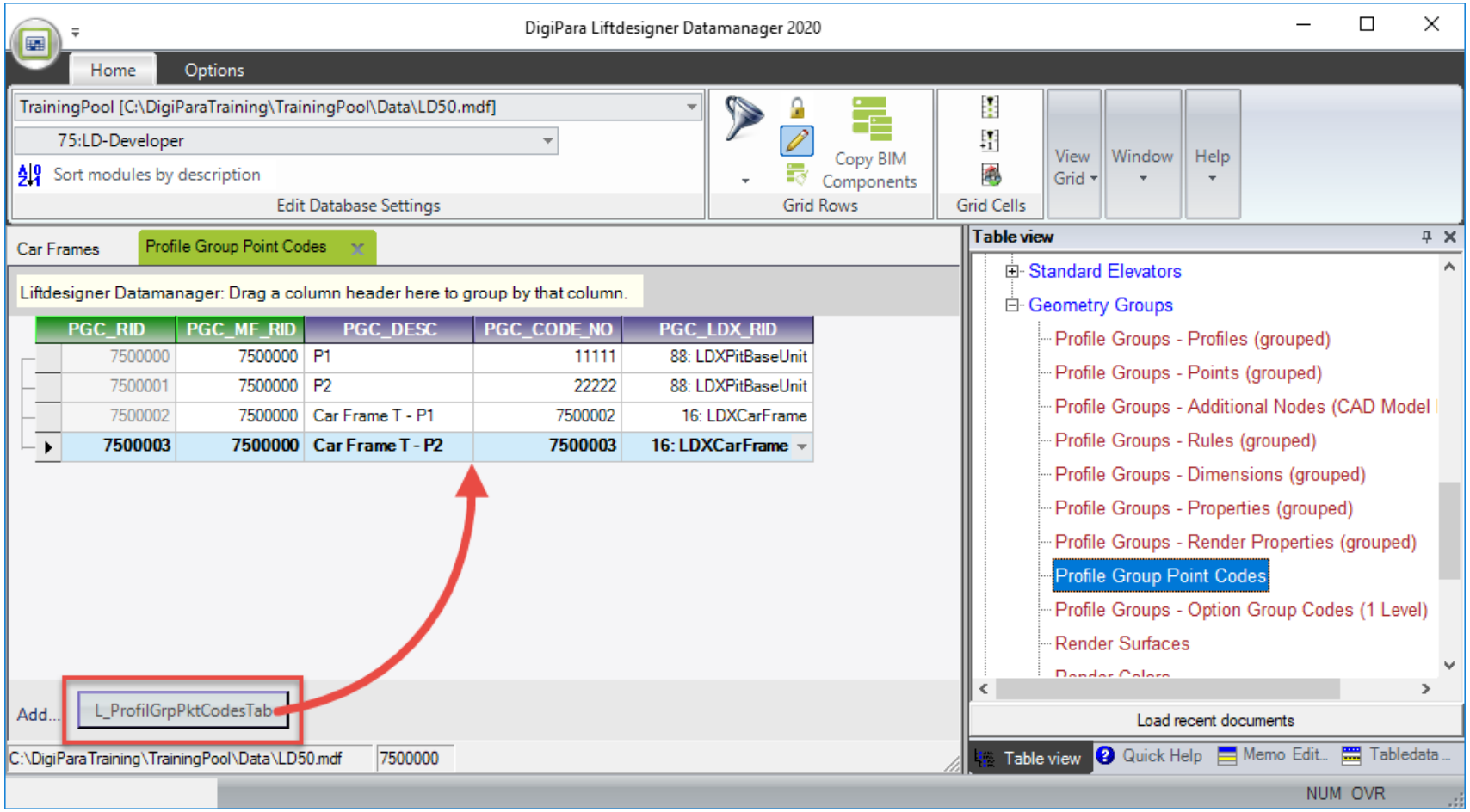
Determine the necessary Point Codes

- in DigiPara Liftdesigner Datamanager



Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

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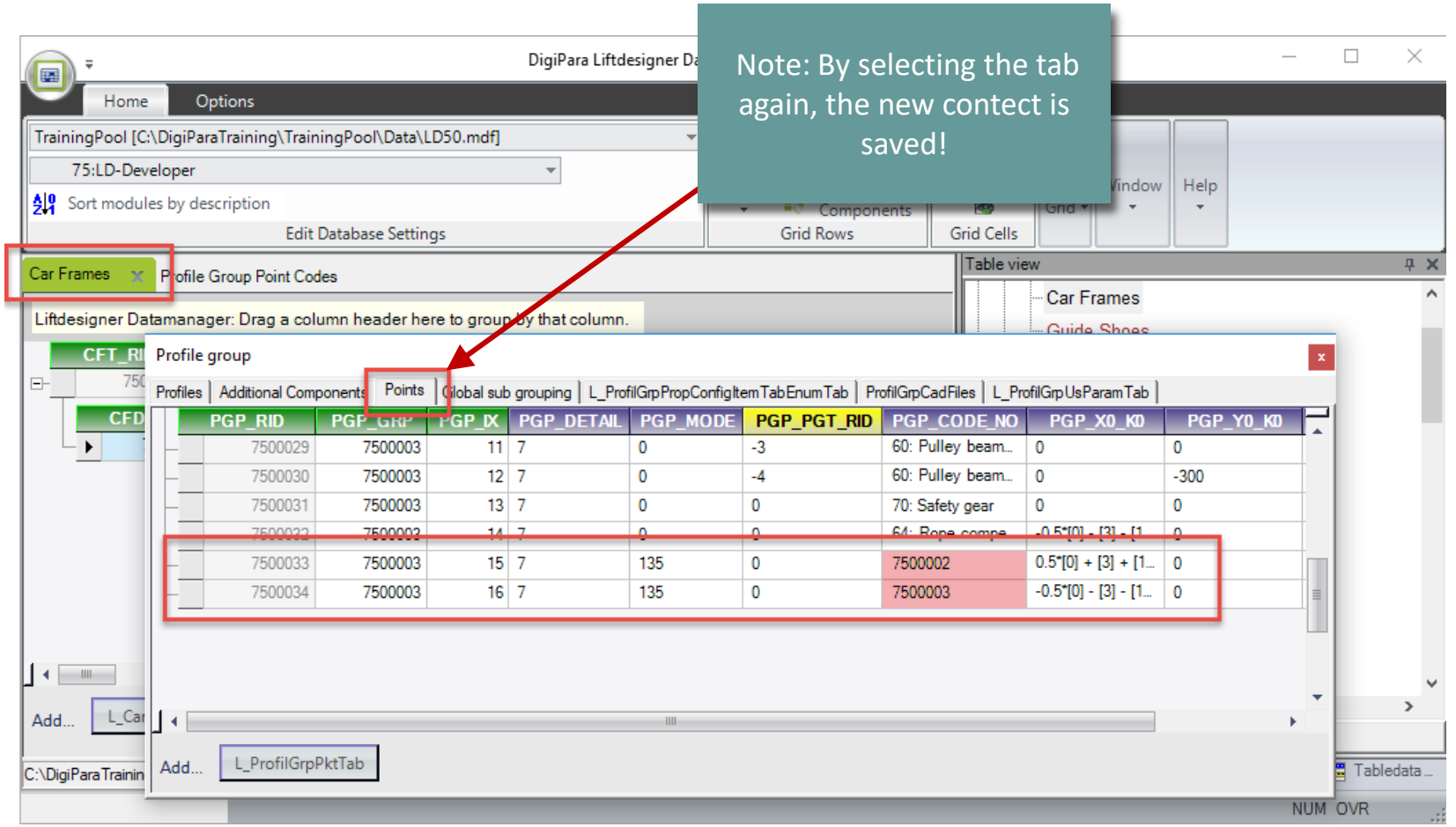
Assign the Point Codes to the new Characteristic Point

- using the associated Profile Group in DigiPara Liftdesigner Datamanager



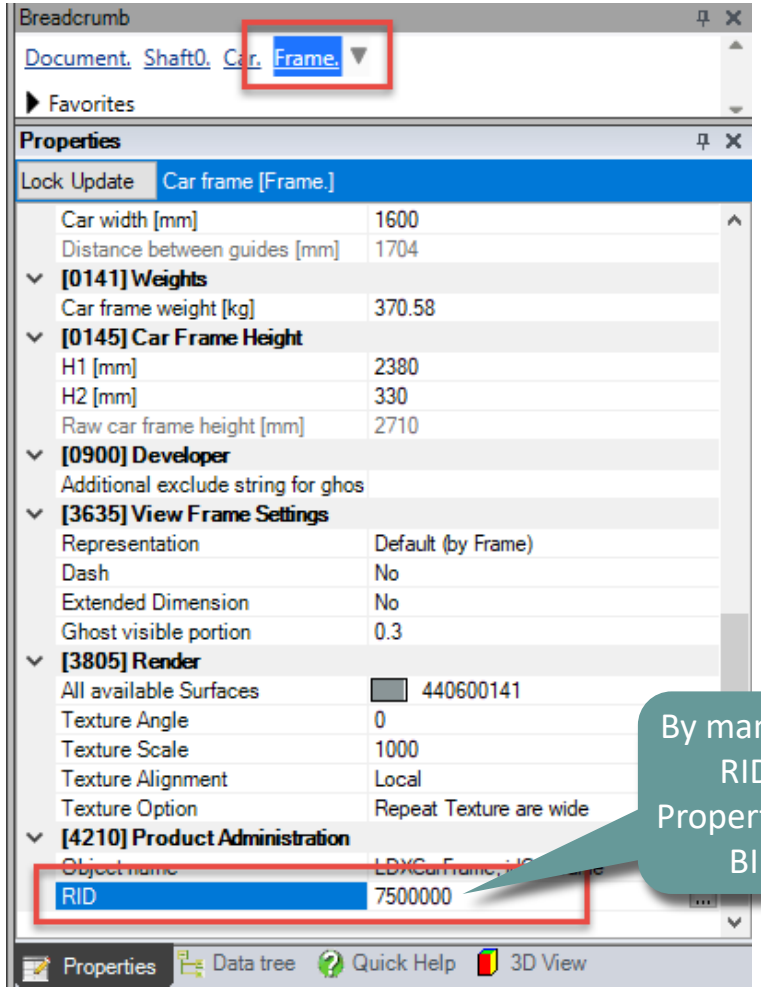
Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

Reload the modified BIM Component

- in DigiPara Liftdesigner

Reload your BIM Component to accept edited values from the DigiPara Liftdesigner Datamanager.



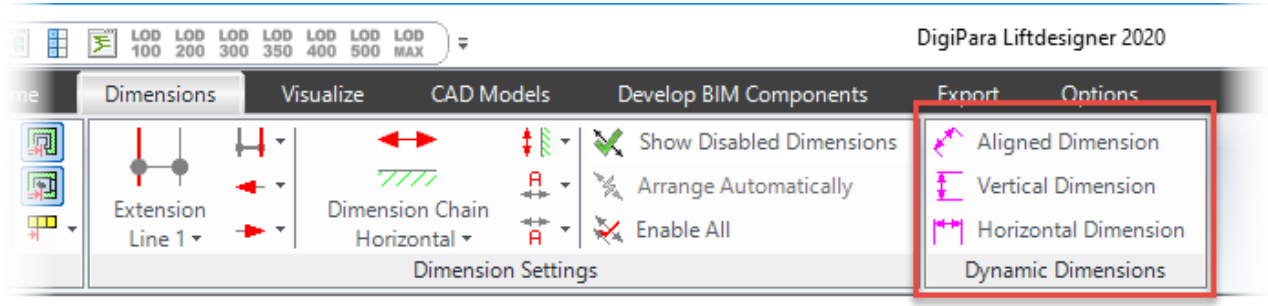
By manually swapping the RID number in the Properties Window for the BIM Component.

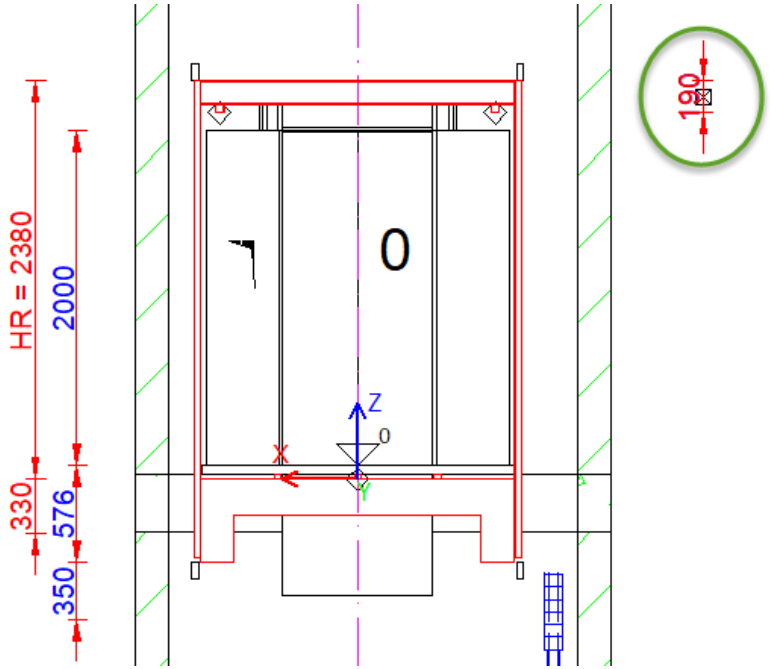
Dynamic Dimension Points

PL2.2 OPTIONAL STEPS - DYNAMIC DIMENSION POINTS

Check the new dynamic Dimension Points

- in DigiPara Liftdesigner via the Dynamic Dimension function





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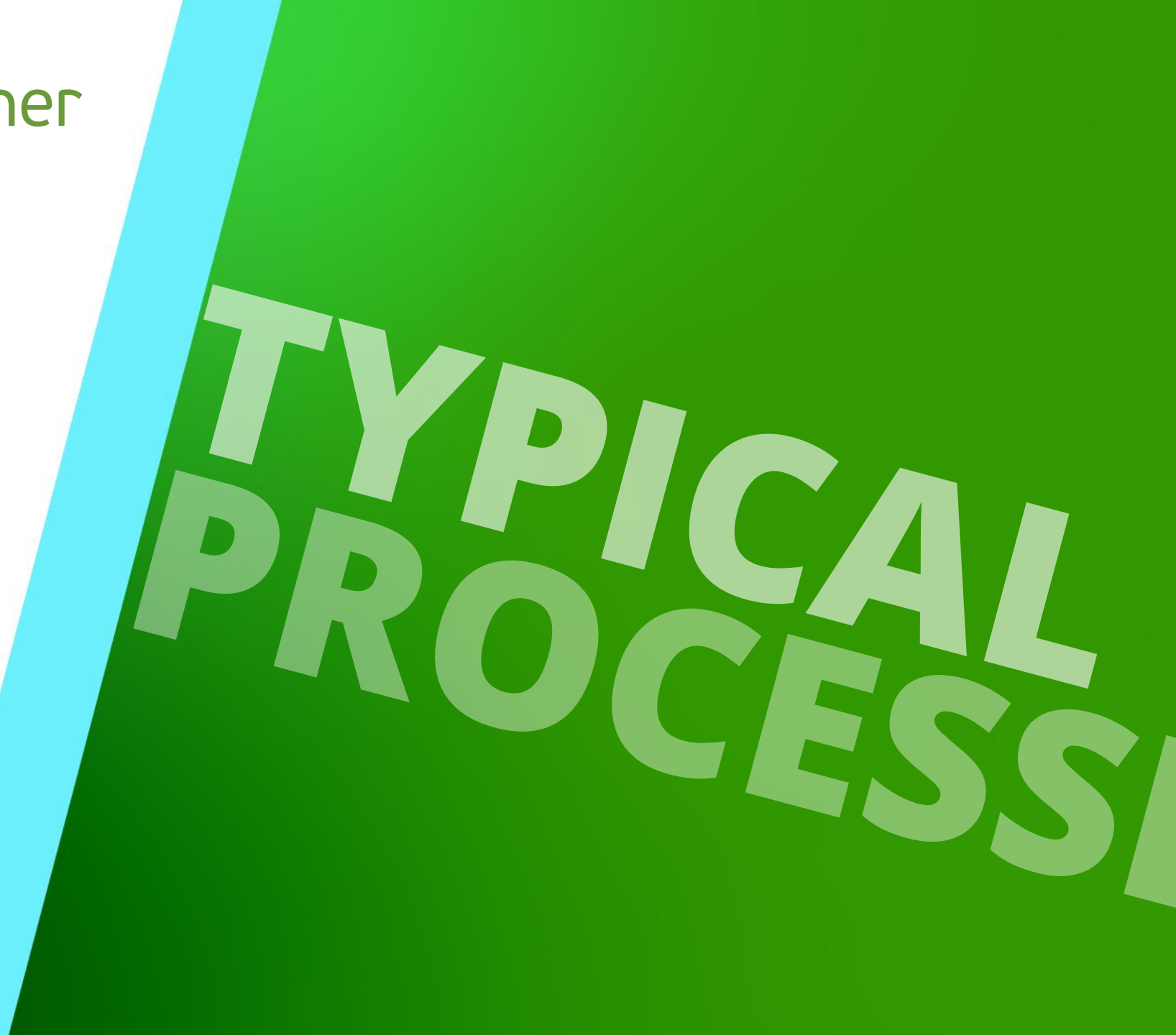
PL2.2

Typical Processes

Pulley Beam



Copy a similar BIM Component

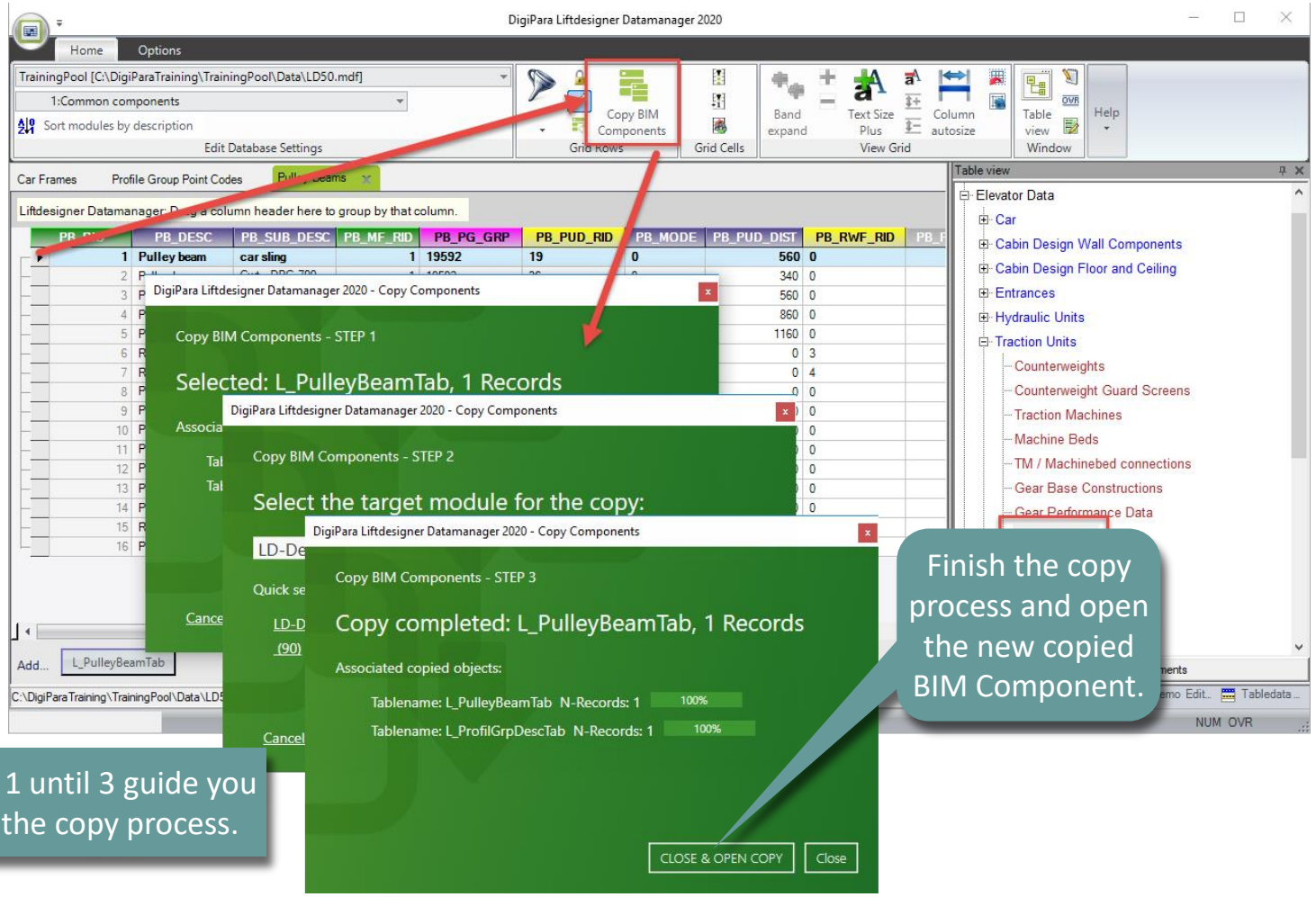
Copy a similar BIM Component

PL2.2 TYPICAL PROCESSES

Copy a similar BIM Component

- in DigiPara Liftdesigner Datamanager

The BIM Component is copied with all parameter and values to a new manufacturer / DigiPara BIM Library.



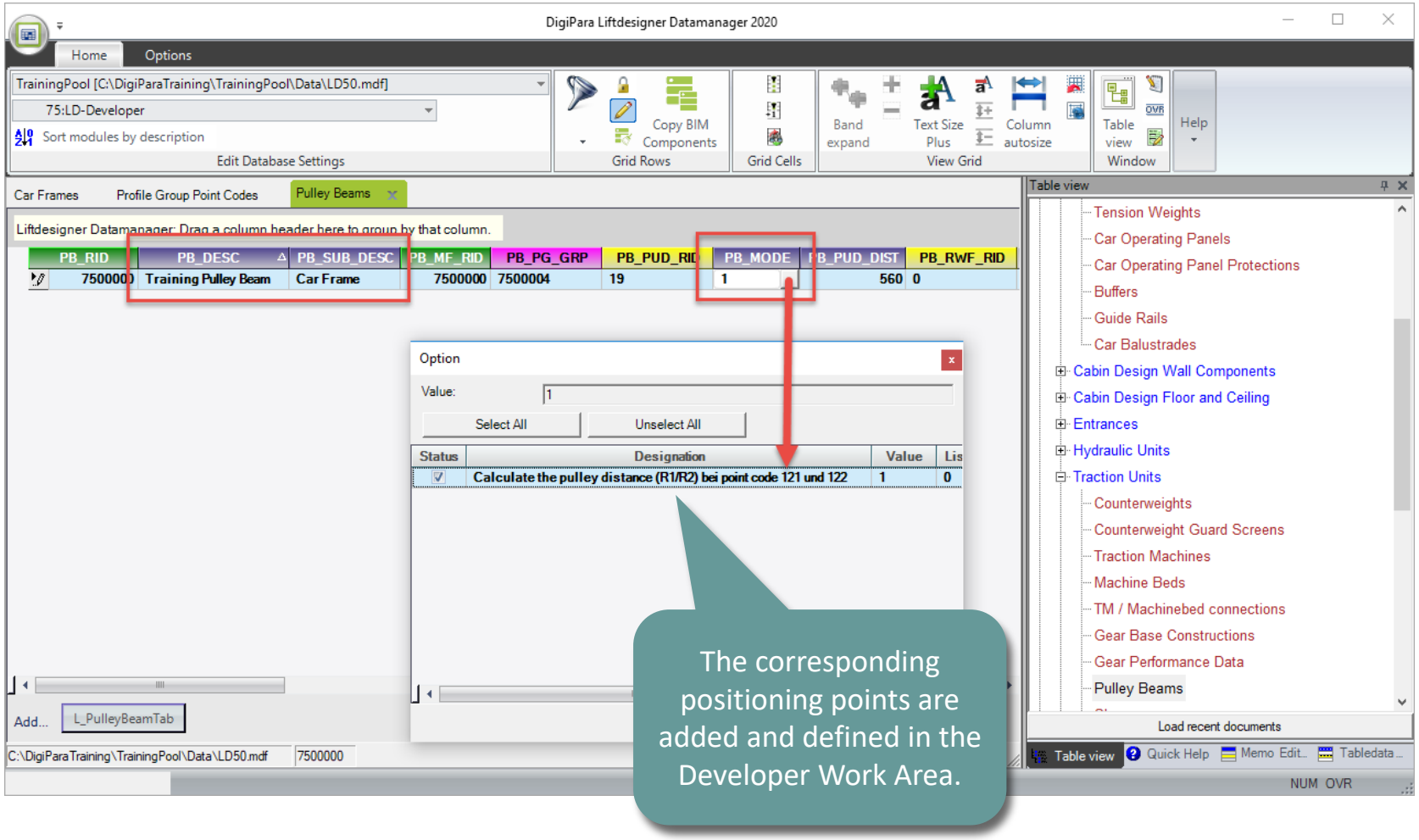
Meta Data & Mode Settings

Meta Data & Mode Settings

PL2.2 TYPICAL PROCESSES

Edit the Meta Data and Mode Settings

- in DigiPara Liftdesigner Datamanager



Determine related BIM Components

Determine related BIM Components

PL2.2 TYPICAL PROCESSES

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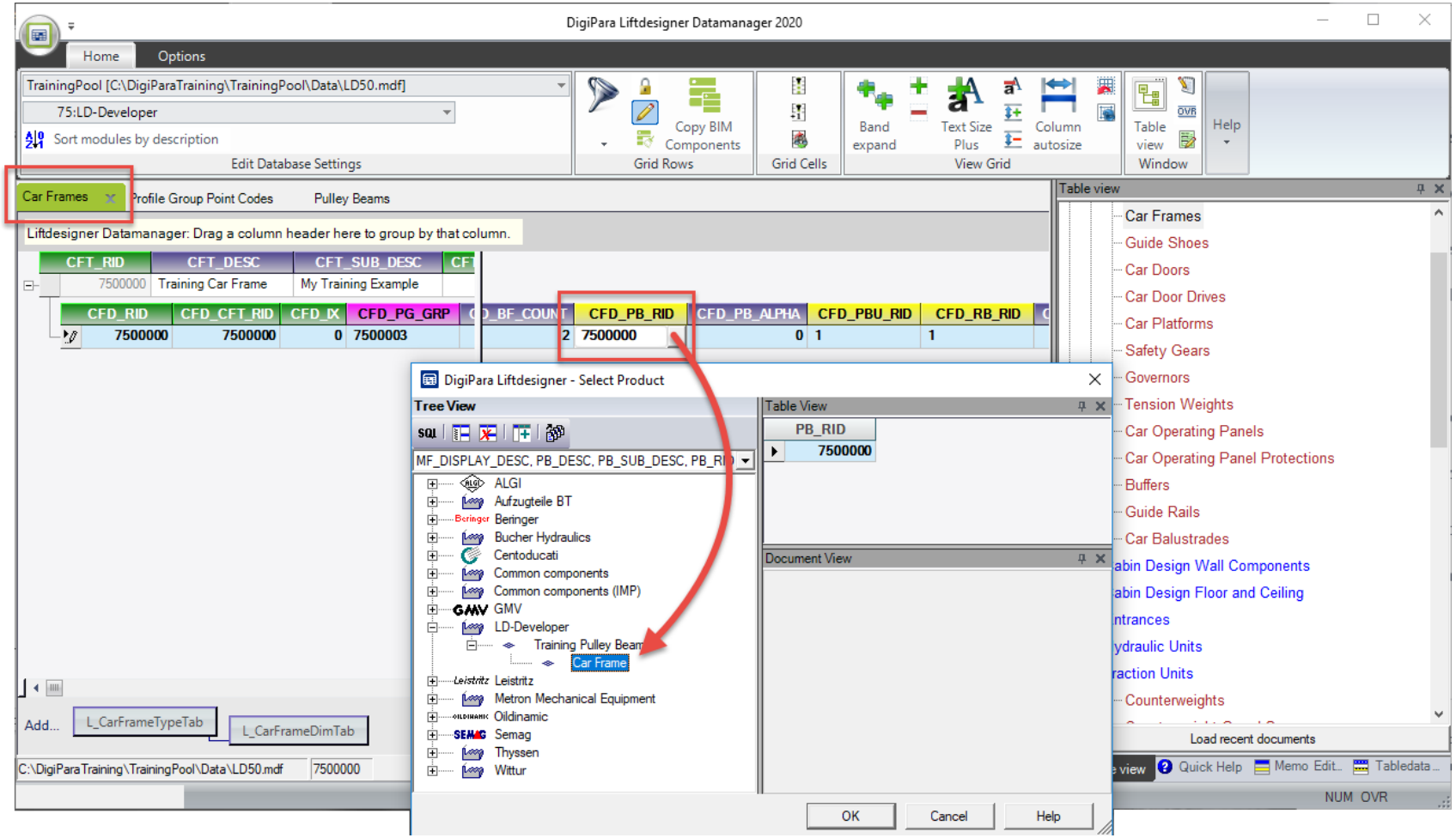
Assign the created Pulley Beam to the finished Car Frame

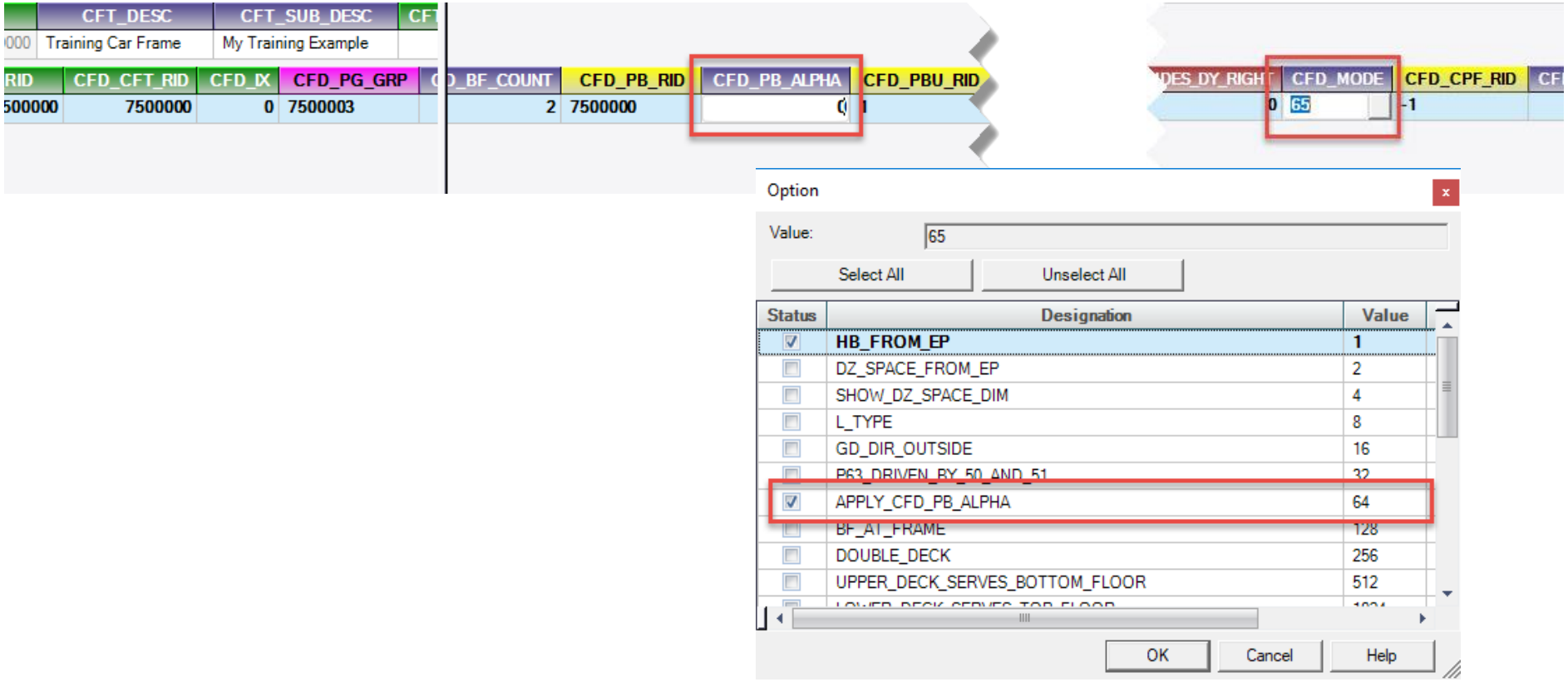
- in DigiPara Liftdesigner Datamanager



Determine related BIM Components

Determine the Pulley Beam Angle by using the corresponding Mode

- in DigiPara Liftdesigner Datamanager



Add & define new BIM Components

Pulley

Add & define new BIM Components

PL2.2 TYPICAL PROCESSES

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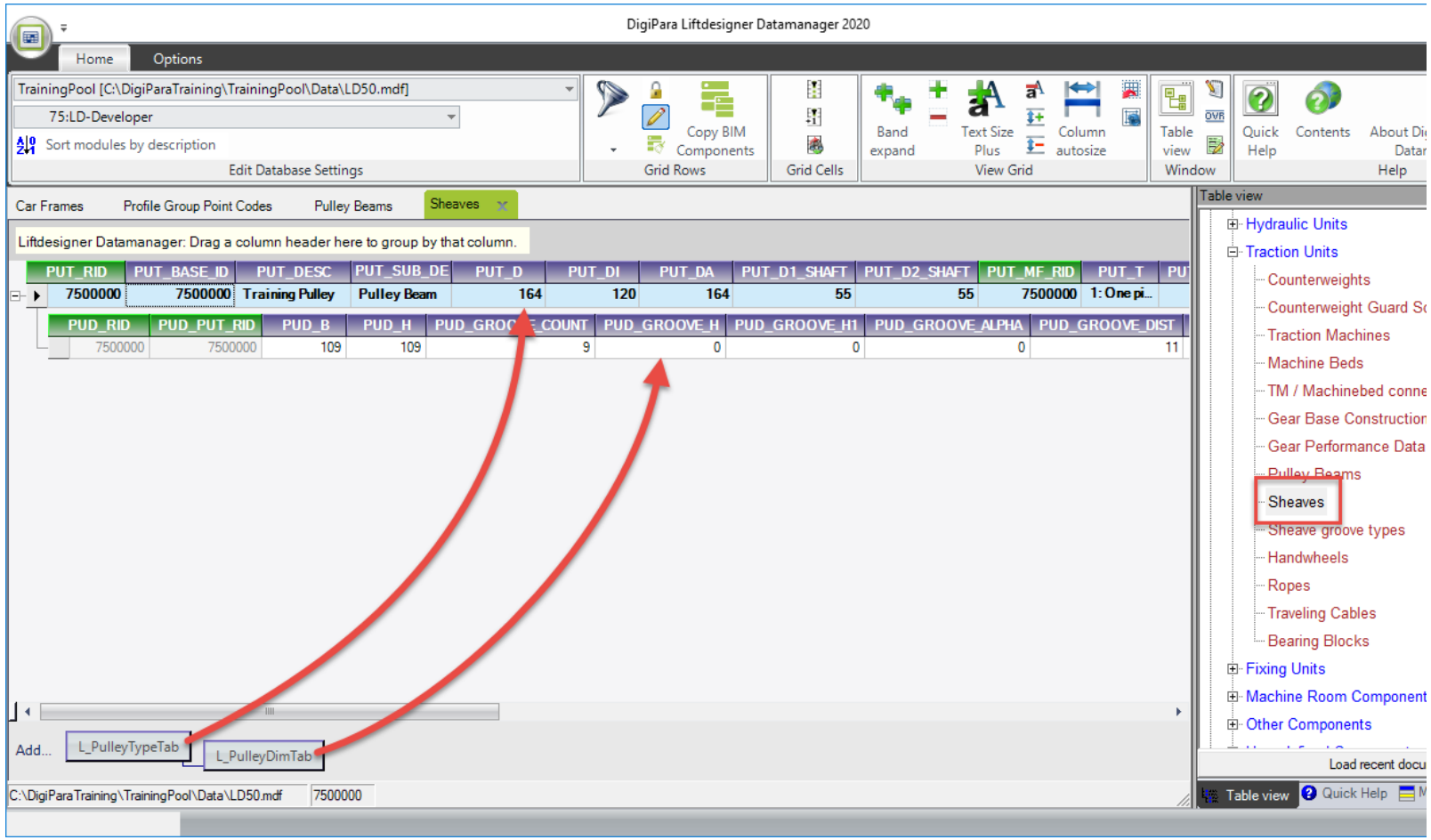
Add and define new BIM Components

- in DigiPara Liftdesigner Datamanager



Add & define new BIM Components

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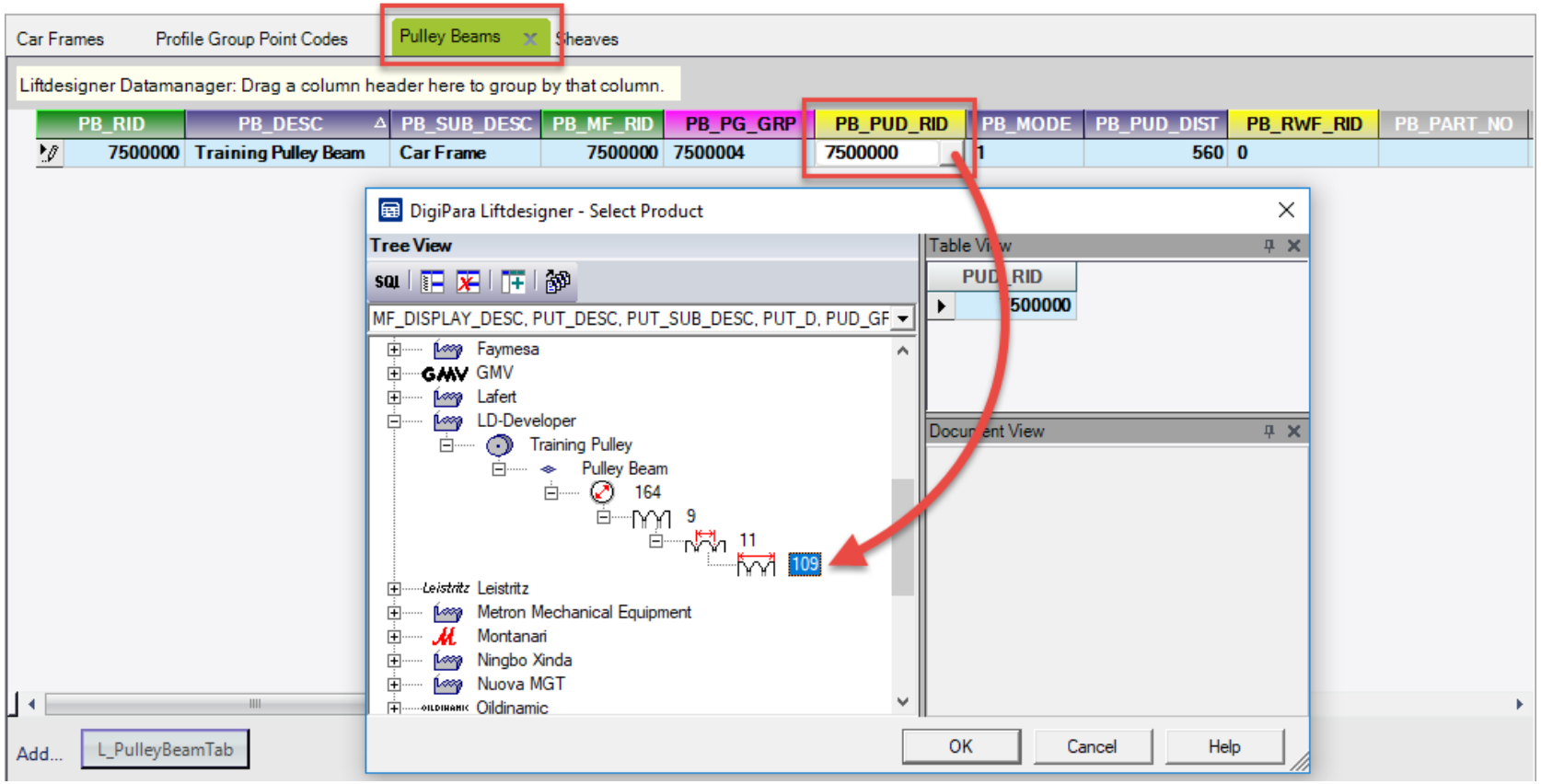
Assign the created Pulleys to the finished Pulley Beam

- in DigiPara Liftdesigner Datamanager



- [x] Reload the modified BIM Component

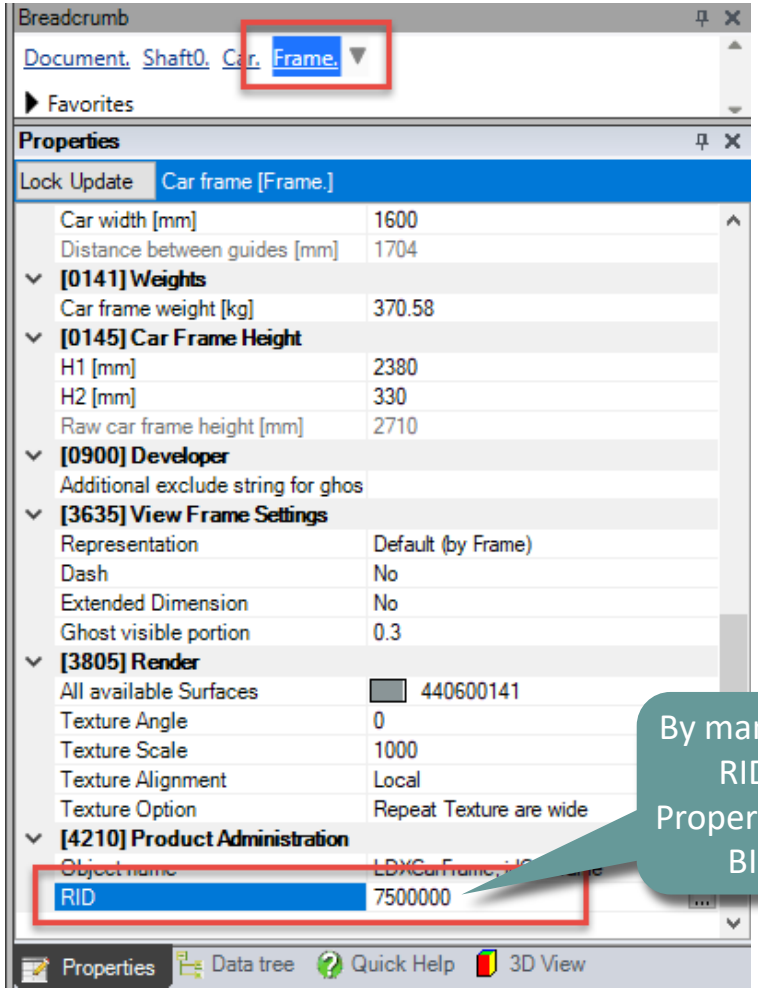
Reload the modified BIM Component

digipara® liftdesigner

Reload the modified BIM Component

- in DigiPara Liftdesigner

Reload your BIM Component to accept edited values from the DigiPara Liftdesigner Datamanager.



By manually swapping the RID number in the Properties Window for the BIM Component.

Set the Positioning Points

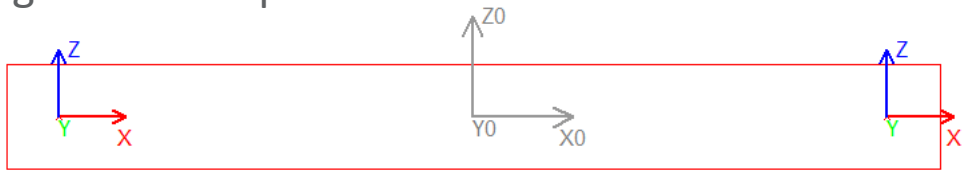
Pulley Beam

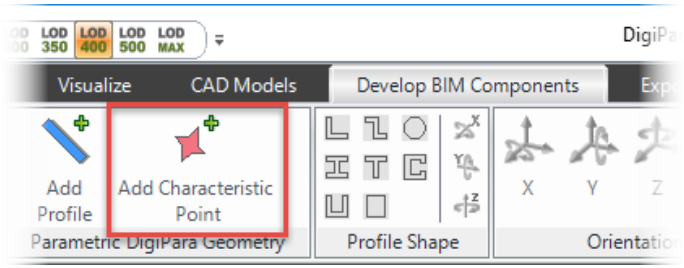
Set the Positioning Points

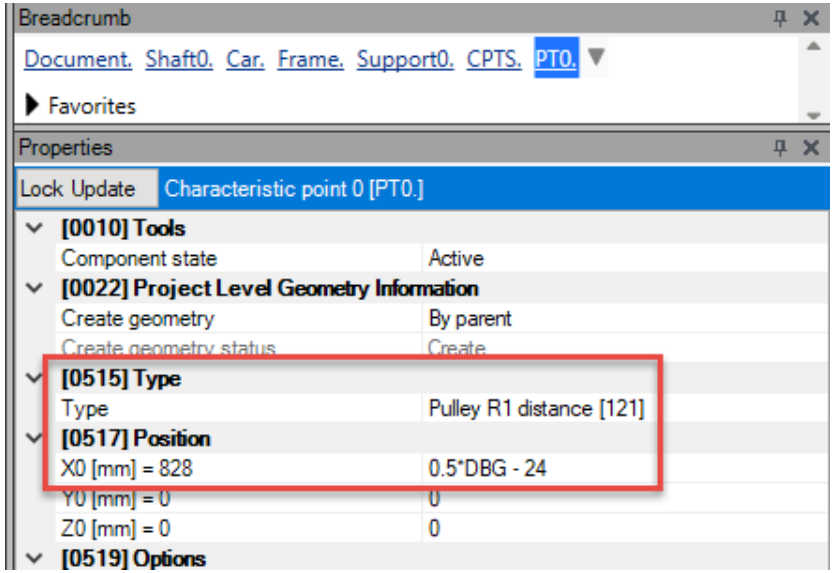
PL2.2 TYPICAL PROCESSES

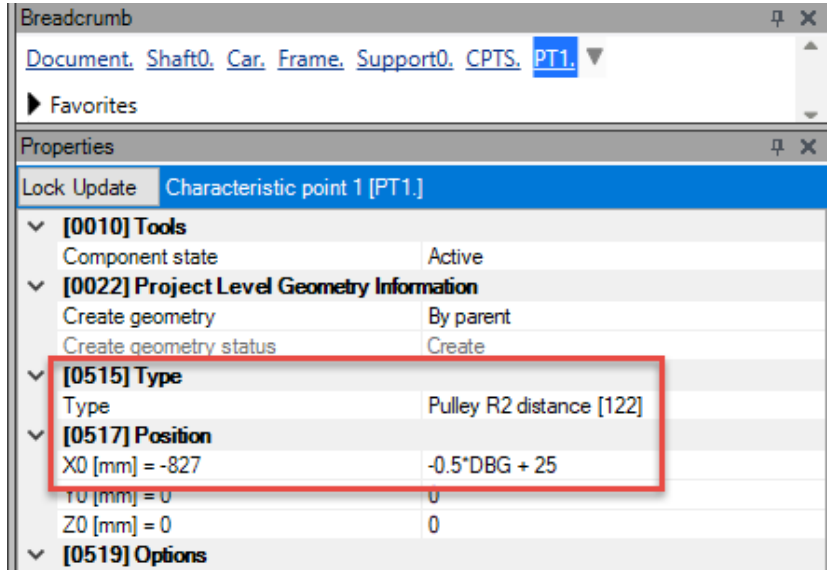
Add and define the Positioning Points of both Pulleys

- using the Developer Works Area









Modify the 3D Geometry

Pulley Beam

Modify the 3D Geometry

PL2.2 TYPICAL PROCESSES

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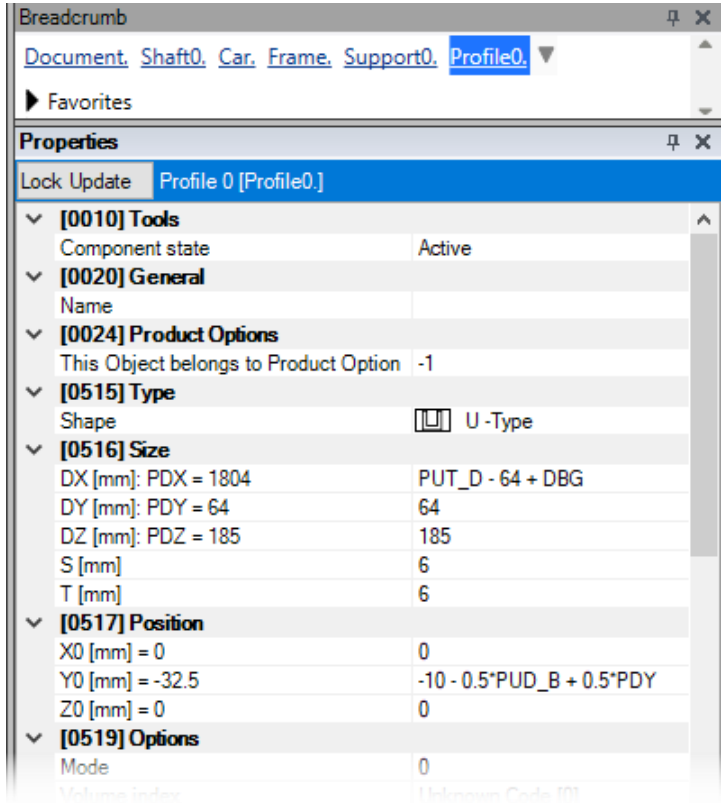
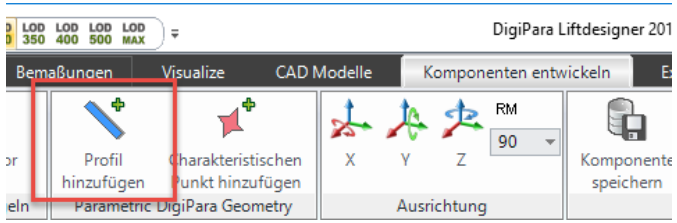
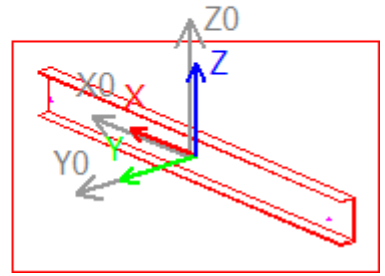
Add and define new Pulley Beam Profiles

- using the Developer Work Area







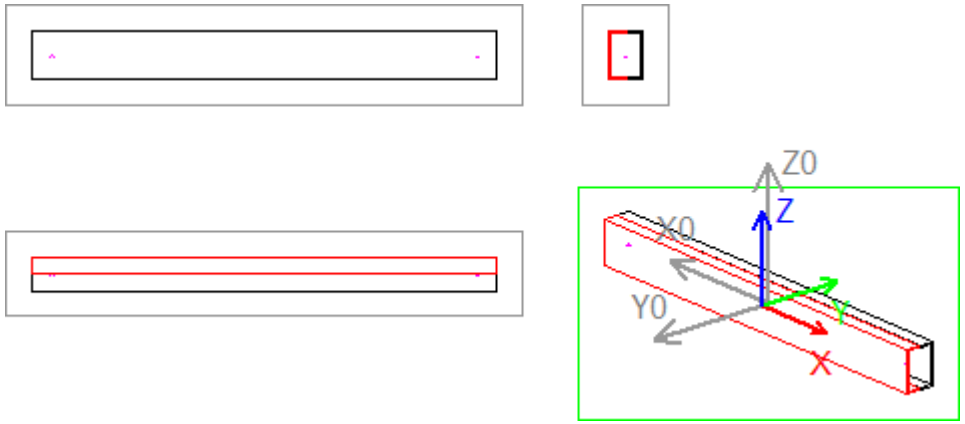
Modify the 3D Geometry

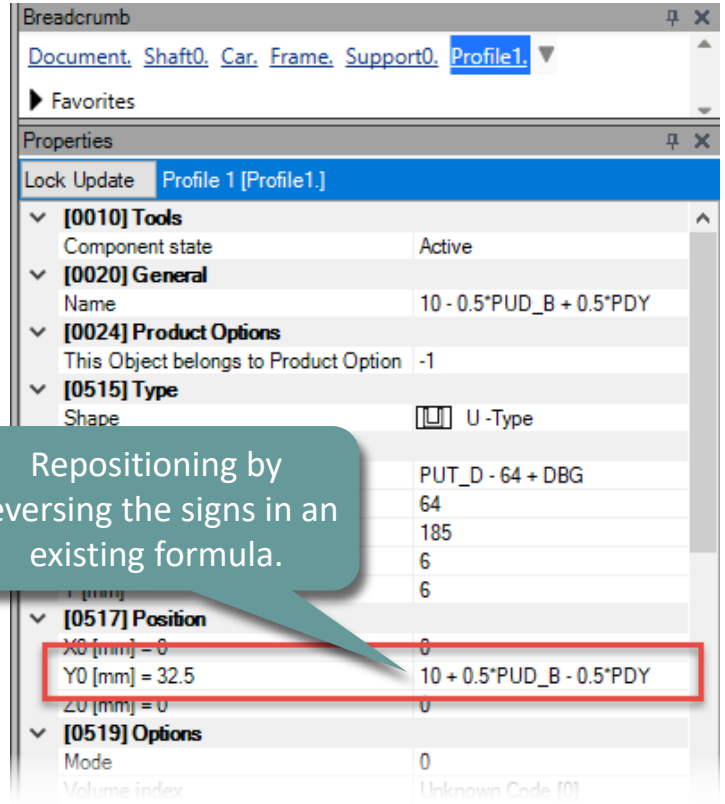
PL2.2 TYPICAL PROCESSES

Copy and customize Profiles

- using the Developer Work Area

Crtl-C = Copy
Crtl-V = Paste



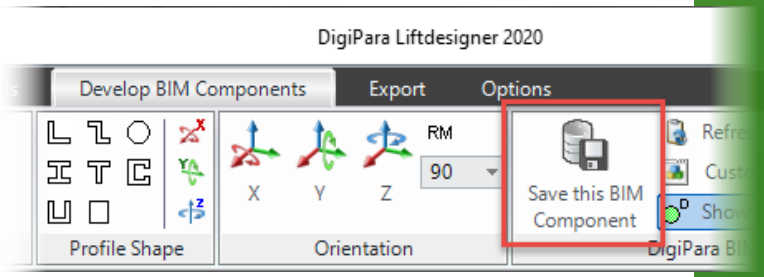


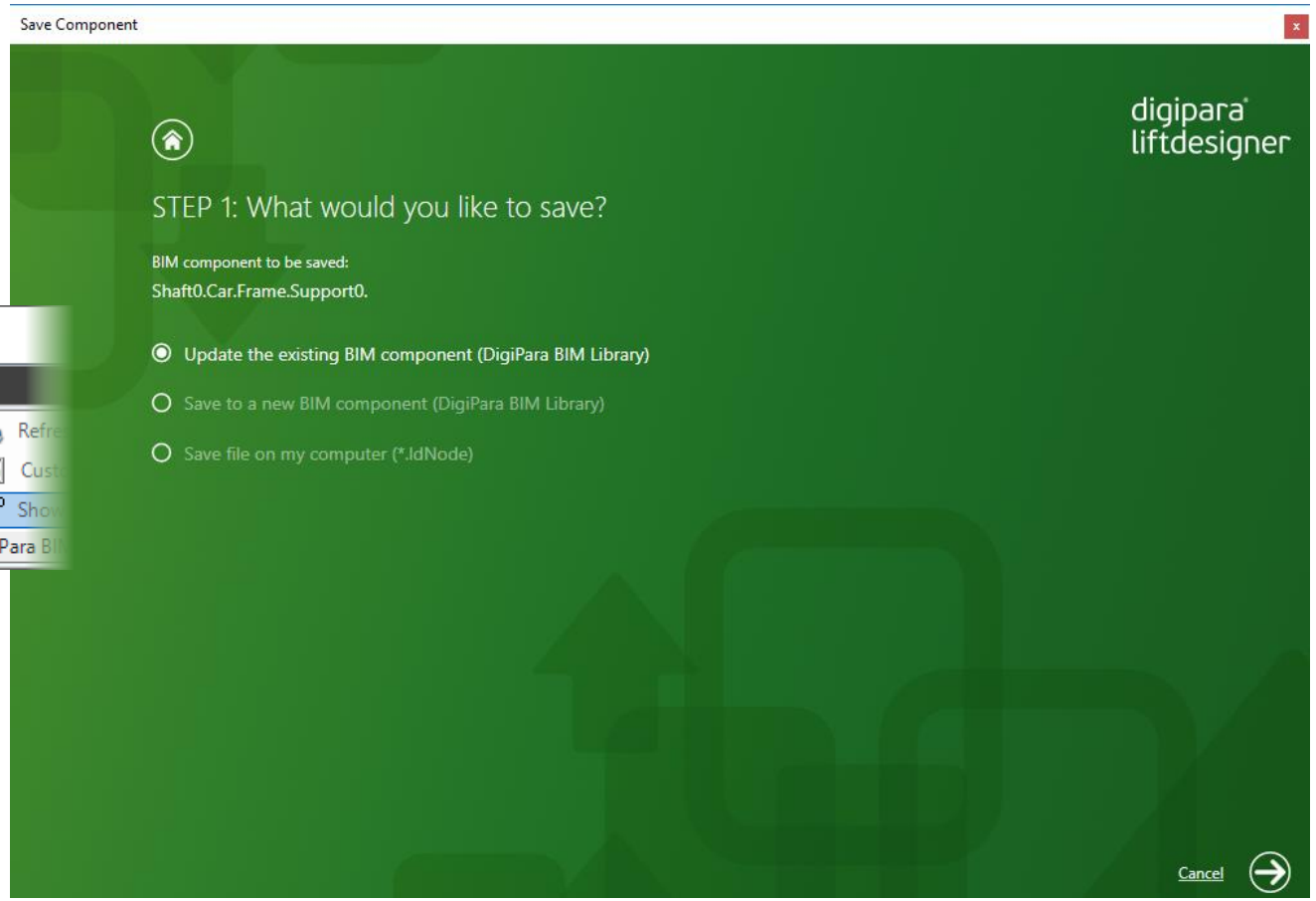
Modify the 3D Geometry

PL2.2 TYPICAL PROCESSES

Save the finished defined BIM Component

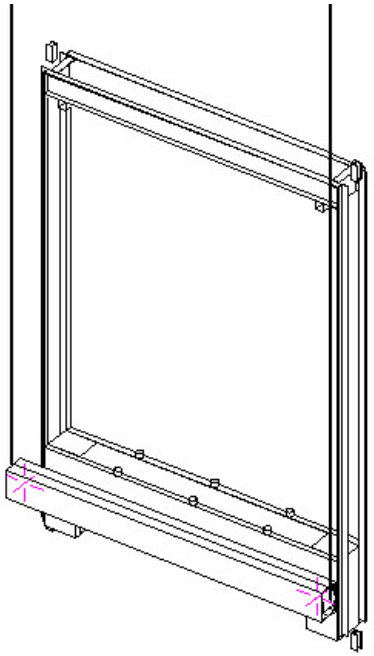
- into the DigiPara BIM Library





Car Frame and Accessories

Result



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PL2.3

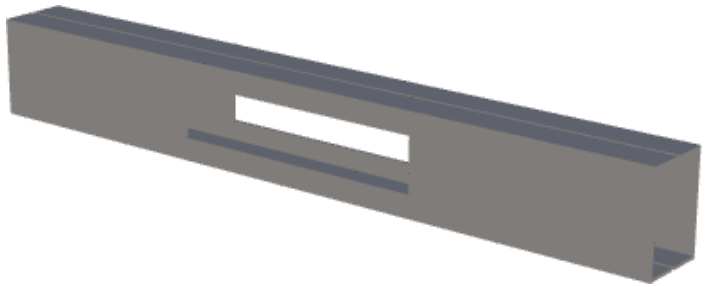
Additional training materials

Cutouts for Profiles

Cutouts for Profiles

via the volume index option

- Add a new Profile Volume Description data record
- Define a new (cutout) profile
- Link all necessary profiles to the given volume index

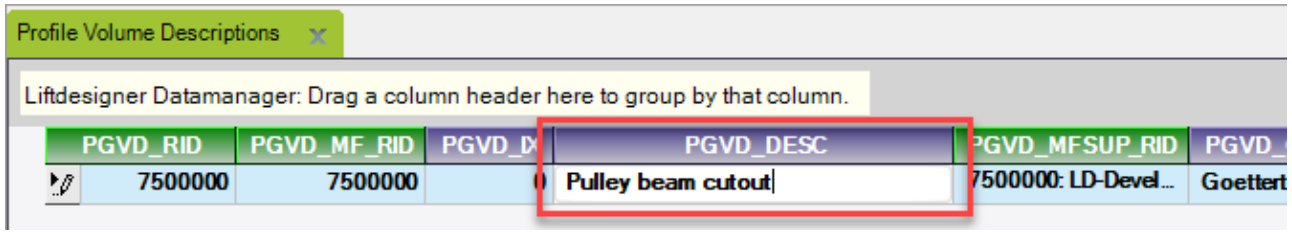


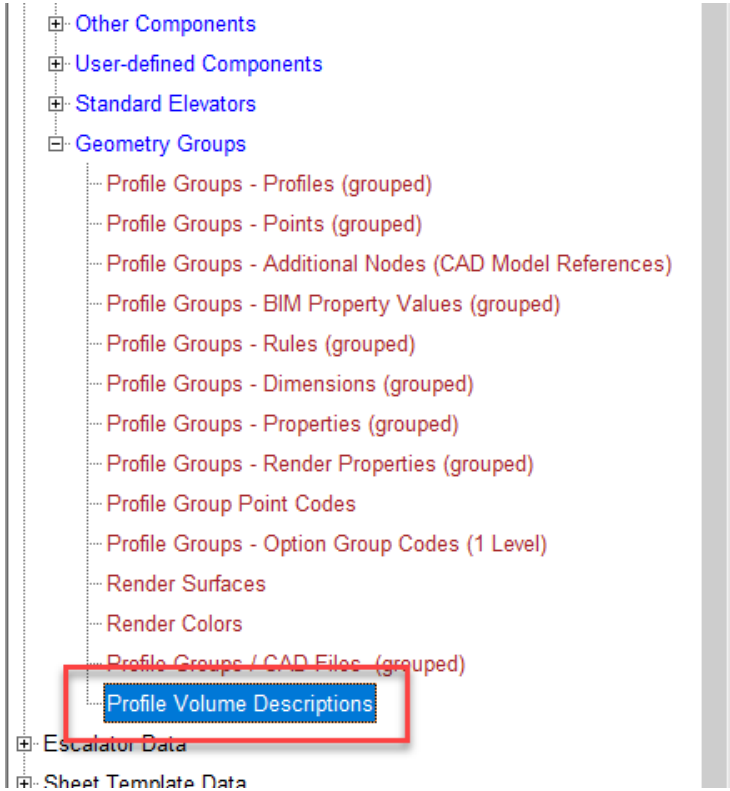
Cutouts for Profiles

PL2.3 ADDITIONAL TRAINING MATERIALS

Add and describe a new Profile Volume Description data record

- in DigiPara Liftdesigner Datamanager



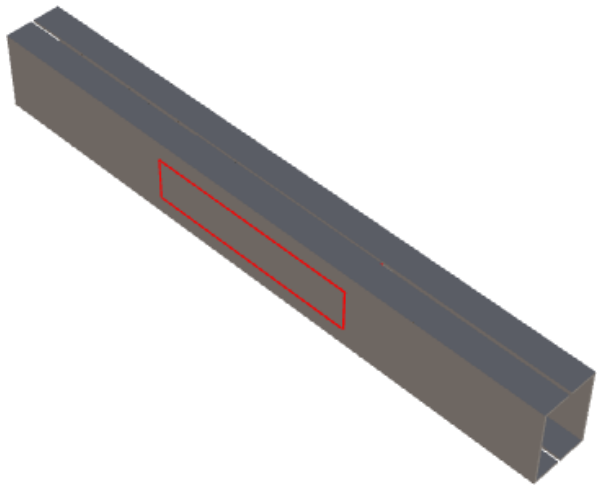


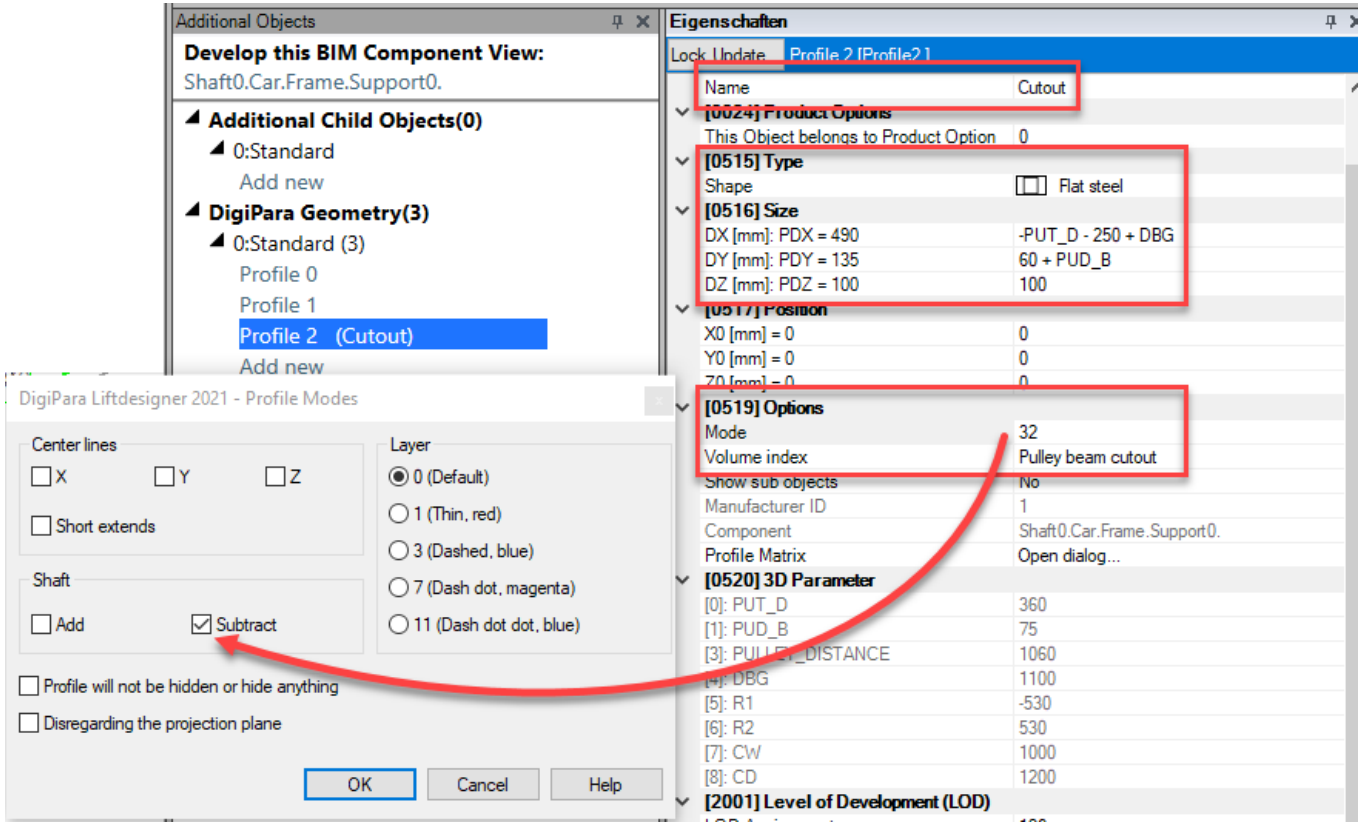
Cutouts for Profiles

PL2.3 ADDITIONAL TRAINING MATERIALS

Define a new (cutout) profile

- in DigiPara Liftdesigner



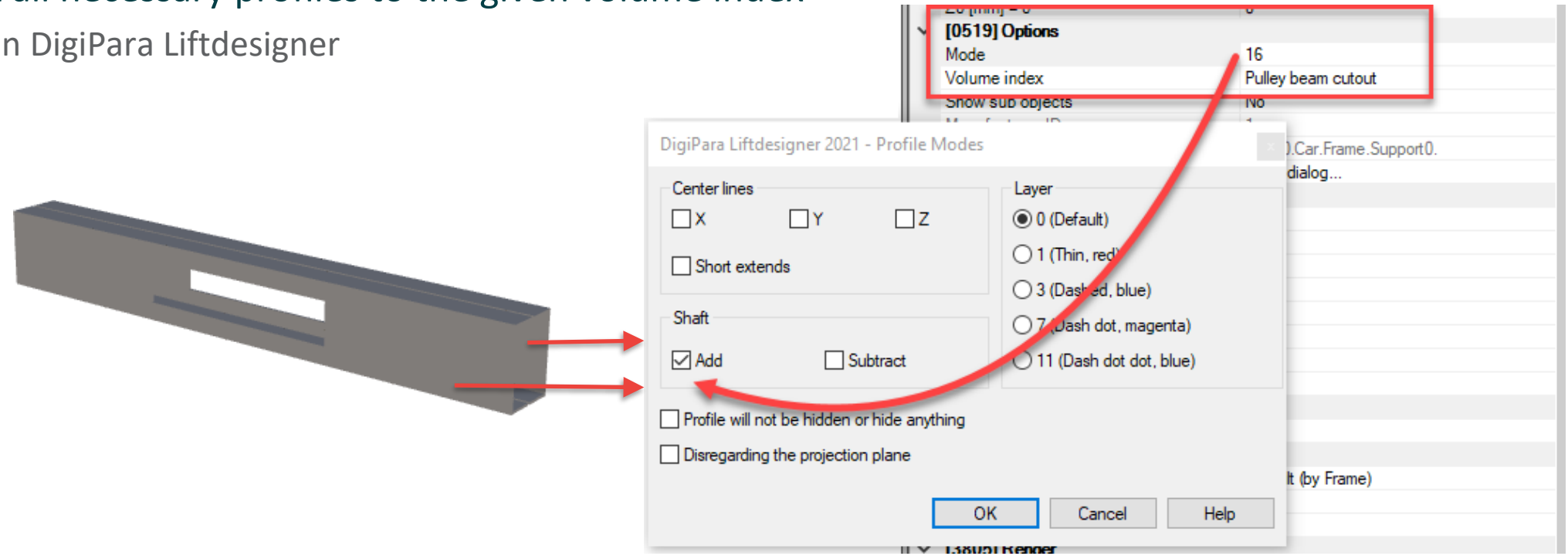


Cutouts for Profiles

PL2.3 ADDITIONAL TRAINING MATERIALS

Link all necessary profiles to the given volume index

- in DigiPara Liftdesigner



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PL2.4

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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