

DigiPara® Liftdesigner

Creating a 2:1 Cantilever Elevator Layout

December 2012

Contact:

Christian Caspar

DigiPara GmbH

Augustinusstraße 11 d

50226 Frechen, Germany

Tel: +49 (0)2234 999 44 888

support@digipara.com

© 2012 DigiPara GmbH All rights reserved.

Except as otherwise permitted by DigiPara GmbH, this publication or parts thereof, may not be reproduced in any form, by any method, for any purpose.

Published by:

DigiPara GmbH

Augustinusstraße 11 d

50226 Frechen, Germany

Contents

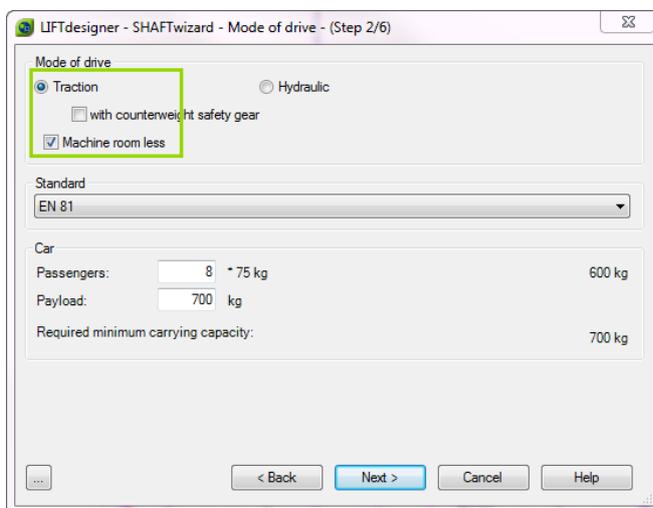
- Introduction..... 1
- Step 1: defining the elevator configurations via the shaft wizard 1
- Step 2: selecting a suitable car frame 2
- Step 3: selecting a suitable counterweight frame 2
- Step 4: aligning the guide rails and changing the DBG 3
- Step 5: selecting suitable gearing..... 4
- Step 6: selecting a suitable machine mount 5
- Step 7: selecting the suitable rail brackets..... 6
- Finished! The result should look like this:..... 7

Introduction

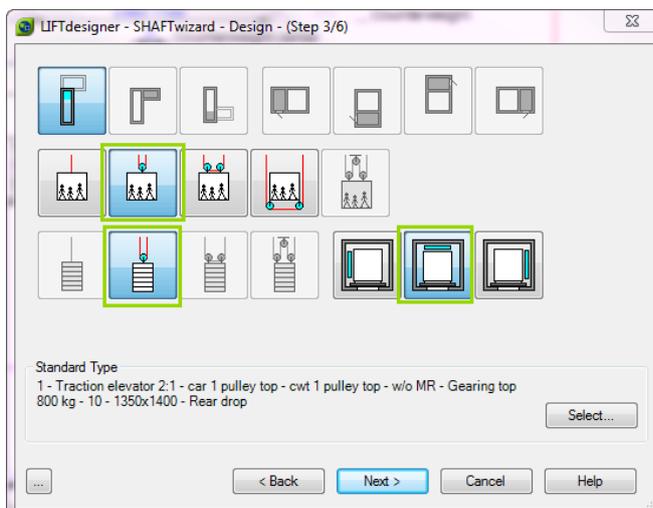
This document will give you an example of how to create a Cantilever elevator layout. There are a wide variety of requirements an elevator has to fulfill, so this layout might need further editing.

Step 1: defining the elevator configurations via the shaft wizard

Please create a new elevator project by clicking on **File** -> **New**. In Step 2 of the shaft wizard, please choose Traction as the drive type and Machine room less layout:



In Step 3 of the shaft wizard, please choose a **Car with one pulley on top** and **Counterweight with one pulley on top** for the 2:1 layout. Furthermore, please choose the **Counterweight on the rear** to enable a Cantilever layout.

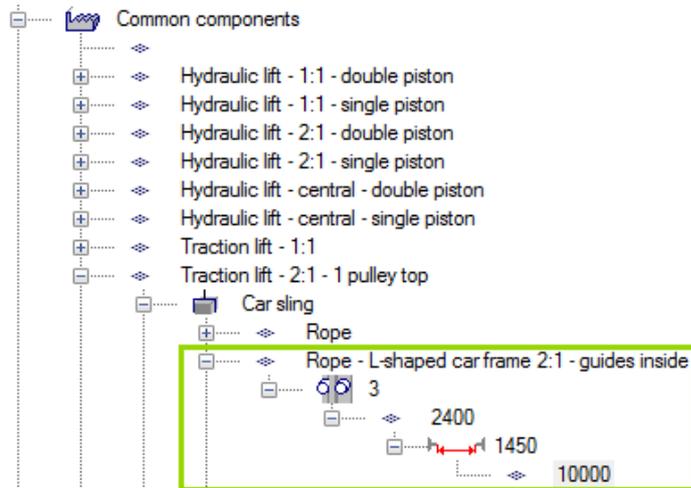


Now please finish the remaining steps of the shaft wizard.

Step 2: selecting a suitable car frame

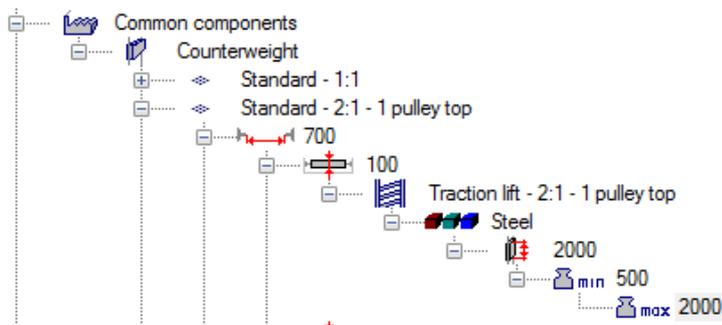
Step 2: selecting a suitable car frame

Please choose a L-shaped car frame, which fits the requirements of a Cantilever elevator layout. Please select the car frame by simply double clicking on it or by selecting it in the Properties window. Please choose the **Traction lift – 2:1 – 1 pulley top -> Car sling -> Rope - L-shaped car frame 2:1 – guides inside** from the common components manufacturer library.



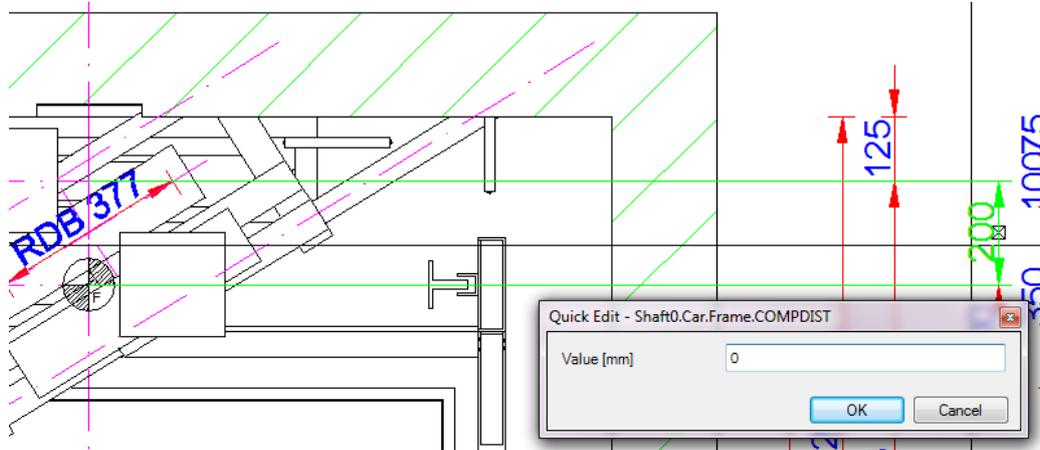
Step 3: selecting a suitable counterweight frame

Please select a suitable counterweight by simply double clicking on it or selecting it in the Properties window. For this example, we choose a **Standard – 2:1 – 1 pulley top -> 700 -> 100 -> Traction lift – 2:1 – 1 pulley top**.

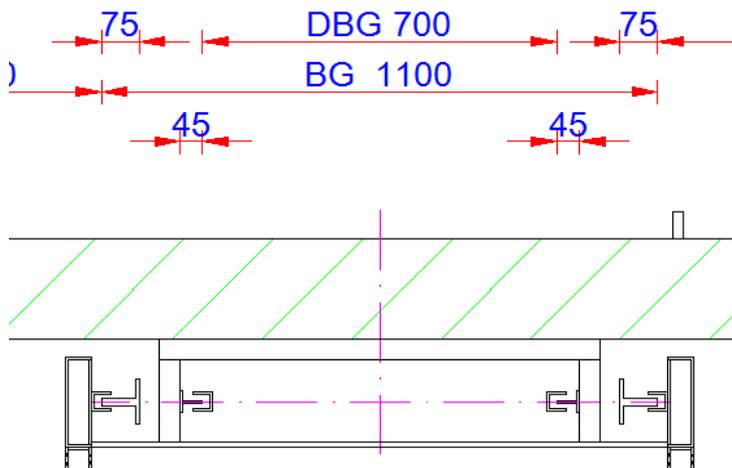


Step 4: aligning the guide rails and changing the DBG

Please align the guide rails of the car frame and counterweight by editing this dimension and setting it back to 0. Simply double click on the dimension to edit its value:



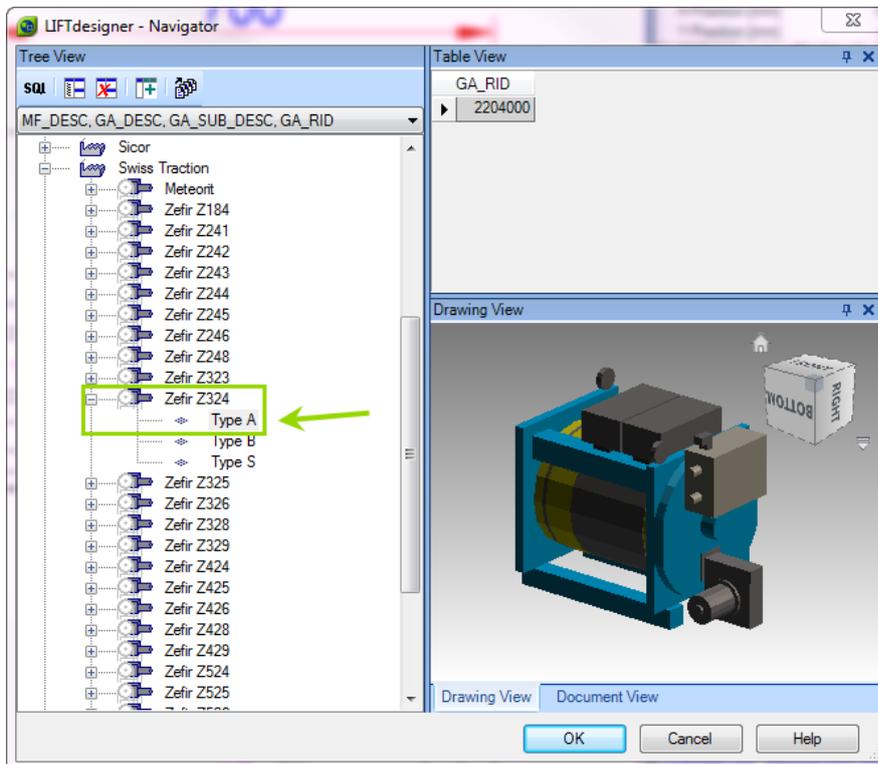
Please also edit the value for the distance between guides of the car frame to BG = 1100:



Step 5: selecting suitable gearing

Step 5: selecting suitable gearing

For this example, please choose a **Swiss Traction**[®] gearing, which fits the requirements of a Cantilever elevator layout. Please select the gearing by simply double clicking on it or by selecting it in the Properties window. Please choose the traction machine type **Zefir Z324 Type A** in the Navigator:

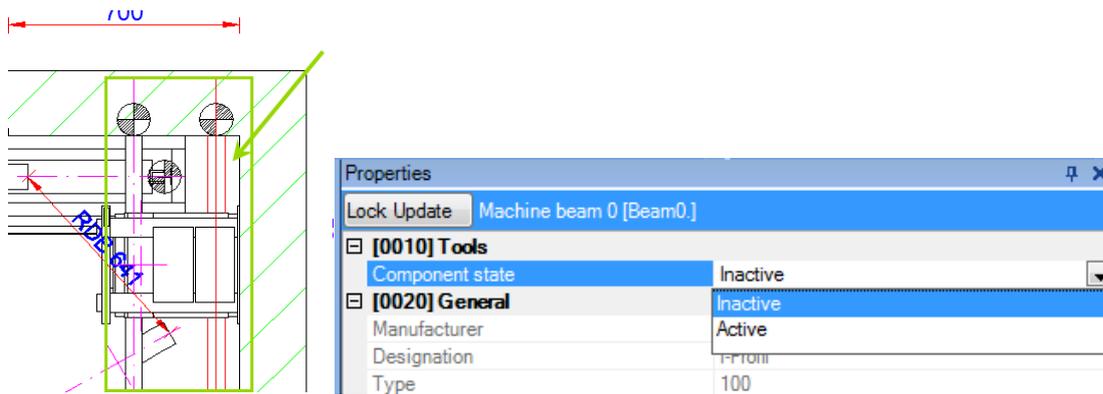


Please align the machine by editing the following parameters accordingly:

[0360] Traction Machine XY - Position		
Roping course	<input type="text" value="CWT - Traction Sheave - Car"/>	CWT - Traction Sheave - Car
Gear alignment	<input type="text" value="Rel. to the Car Axis"/>	Rel. to the Car Axis
X-Position [mm]	<input type="text" value="170"/>	170
Y-Position [mm]	<input type="text" value="-80"/>	-80
[0361] Traction Machine Z - Position		
Reference plane	<input type="text" value="Overhead"/>	Overhead
Reference plane location	<input type="text" value="900"/>	900
Height of the gear base [mm]	<input type="text" value="50"/>	50
Distance between gear beams and gear	<input type="text" value="0"/>	0
Height of the gear beams [mm]	<input type="text" value="0"/>	0
Height of the machine bed [mm]	<input type="text" value="0"/>	0
[0362] Traction Machine Angle		
Angle calculation	<input type="text" value="Manually"/>	Manually
Angle	<input type="text" value="270"/>	270
[0364] Traction Machine Above		
Location	<input type="text" value="Aligned to car"/>	Aligned to car
Alignment distance [mm]	<input type="text" value="0"/>	0

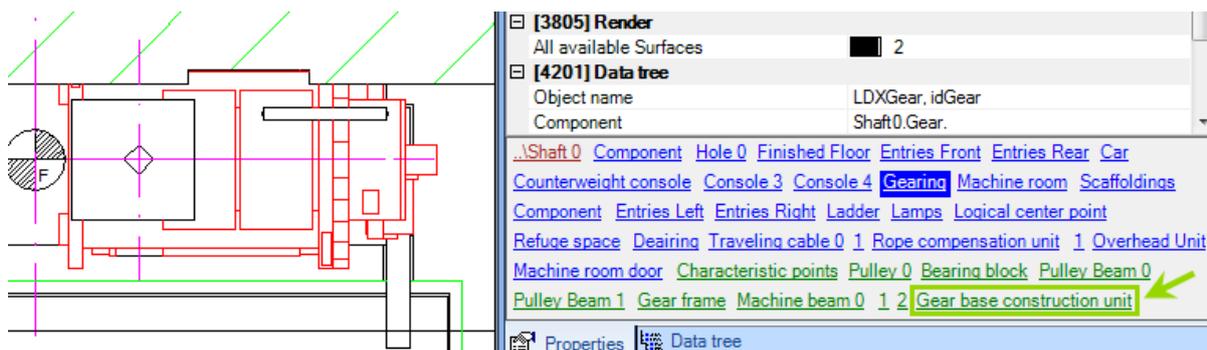
Step 6: selecting a suitable machine mount

Deactivate the machine beams by setting them to an inactive status:

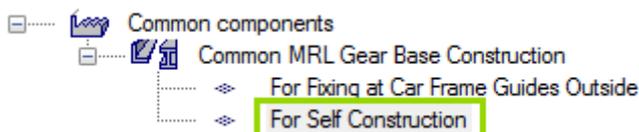


Step 6: selecting a suitable machine mount

Please click on the gearing and select the **gear base construction unit** in the Properties window:



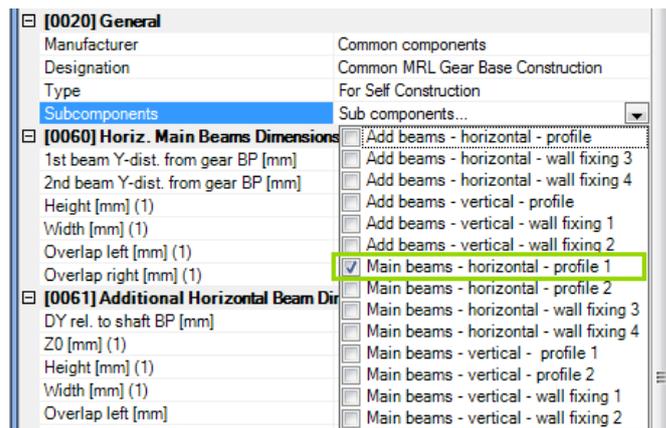
Please select **For self Construction** in the Navigator:



Now please make the following changes to the unit as shown in the screenshots below:

1. Remove all check marks except the **Main beams – horizontal – profile 1**

Step 7: selecting the suitable rail brackets

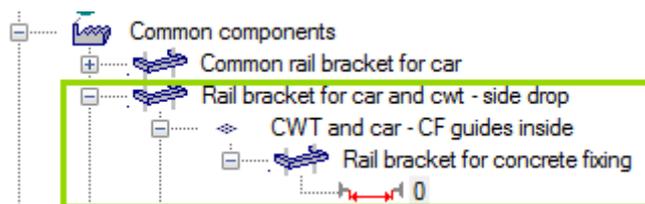


2. Edit the values for the **Horiz. Main Beams Dimensions/Position**

[0060] Horiz. Main Beams Dimensions / Position	
1st beam Y-dist. from gear BP [mm]	0
2nd beam Y-dist. from gear BP [mm]	0
Height [mm] (1)	50
Width [mm] (1)	280
Overlap left [mm] (1)	-425
Overlap right [mm] (1)	-425

Step 7: selecting the suitable rail brackets

Please select a suitable rail bracket by simply double clicking on it or selecting it in the Properties window. For this example, please choose **Rail bracket for car and cwt – side drop**->**Rail bracket for concrete fixing**:



Finished! The result should look like this:

Finished! The result should look like this:

