EL3

# Excel Reports & Automation

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#### 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.



A prerequisite for this training module is a basic knowledge of using the DigiPara Liftdesigner data

#### tree and project references as well as Excel.

Pre-recommended basic module: <u>A3 – Drawing Creation Fundamentals</u>



#### EL3.1 Simplified Excel Report

- General information
- Create and save an Excel Report
- Export Project Values



#### EL3.2 Excel Project Integration

- General information
- Excel Reporting Docking Window
- Create and save an Excel Project Integration
- Transfer of Excel as well as DigiPara Liftdesigner Values
- Open and edit in Excel
- Load existing external Excel files



#### EL3.3 Creating a drop-down list for component exchange

- Exchange BIM components via Excel Project Integration by using appropriate RID numbers.
  - Creating a drop-down list for component exchange

#### EL3.4 After Training Practice

- Define your own Excel file for Project Integration
  - Recommended workflow

#### EL3.5 Summary

Custom Q&A's

# EL3.1

Simplified Excel Report





## **Training Preparation**

CREATE AN ELEVATOR WITH THE FOLLOWING SPECIFICATIONS:

#### Shaft Wizard

- 5 floors
- Typical floor to floor distance 3000 mm
  - Consider travel no
  - Create building floor levels no
- Traction elevator 2:1
- 13 persons / 1000 kg, 1 m/s
- Machineroom
  - Below / left
- Car roping
  - 2 pulleys below
  - with CW safety gear
- Counterweight roping, left
  - 1 pulley on top
- Sheet Templates
  - LD Installation Drawing
  - LD Typical Views For Your Elevator

## Further specifications

- Car size
  - Car width : 1600 mm
  - Car depth : 1400 mm
- Entrances
  - Front: all floors
  - Rear: first and last level
- Individual Floor to Floor Distance
  - Pit: 1200 mm
  - E1: 2900 mm
  - E2: 3000 mm
  - E3: 3000 mm
  - E4: 3800 mm
- Save the project under the following file name: LDTrainingSample.ld3

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#### **General Information** EL3.1 SIMPLIFIED EXCEL REPORT

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

Guide Rail Calculatio	on ×	+	
$\leftrightarrow$ $\rightarrow$ C () C	atei C:/Users		ld301_EN81GuideCalcCar.htm
Project Specifications			
Lift manufacturer:			Customer
Project number:			123
Project name:			Training
Prepared by:			Customer
			Guide Rail Calculation
			EN 81, appendix G
System values			
		=	Weights
Car	F(c)	-	0 kg
Car frame	F(Fr)	=	0 kg
Car door 1	F(D1)	=	0 kg
Car door 2	F(D2)	=	kg
Car door 3	F(D3)	=	kg
Car door 4	F(D4)	-	kg
Total car	P	=	kg
Rated load	Q	=	9/5 kg
Detroit Orderer		=	Guiding distances
Between fixings		-	mm
between the guide shoes		-	Car quide rail
Type		-	T 70-70-9/A, 70 x 70 x 9
Area	Α	=	1125 mm <sup>2</sup>
Mom. of resistance XX	W(xx)	-	10790 mm <sup>3</sup>
Mom. of resistance YY	W(yy)	=	7020 mm <sup>3</sup>
Geometric inertia XX	I(xx)	=	528100 mm <sup>4</sup>
Geometric inertia YY	I(yy)	-	246200 mm <sup>4</sup>
Min. radius of inertia	I(mri)	-	14.8 mm
Flange width	ć	=	7.9 mm
Weight per m	P(Gd/m)	=	8.83 kg/m
Guiding length	L(Gd)	=	m
Material	R(M)		
1.			Safety gear operation
		-	Safety gear
Impact factor	k1	=	

1.		Safety gear operation
Impact factor	k1	= Safety gear =
Cab	xC	Levers of weights (mm) = mm

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2 3 4 5	Project data Project name: Project number:	Training						
6 7 8	Address:	0						
9 10 11	Project started: Elevator	06/07/2020						
13 14 15	Elevator number:	975	kg					
16 17 18 19	Persons: Travel: Speed(upwards): Stops:	13 11100 1 4	mm m/s					
20 21 22	Shaft Width:	1615	mm					
23 24 25 26	Depth: Height: Head: Da-	1605 16350 4000 1250	mm mm mm					
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#### **General Information** EL3.1 SIMPLIFIED EXCEL REPORT

#### The Reports button remains inactive for unsaved projects.



Project not saved



Project saved

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# Create and save an Excel Report

### Create and save an Excel Report

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EL3.1 SIMPLIFIED EXCEL REPORT

Some default documents, like e.g. the Sample-Lift-Data Excel report can already be created

• via the export file menu option.

🔡 DigiPara Liftdesigner 2021 - Reports - [C:\ProgramData\DigiPara\2021\dcc\DataPool\Forms\*.xls;*.xlsx;*.xlsm;*.htm;*.rtf;*.txt]	×
] EN81-Calculations.xls	~
Sample-Lift-Data.xls	
] CIBSE Elevator PDT.xlsx	
] EN81GuideCalcCar.htm	
] EN81GuideCalcCar_Results.htm	
] EN81GuideCalcCounterweight.htm	
] EN81GuideCalcCounterweight_Results.htm	
] EN81GuideCalc_FlangeExt.htm	
] EN81ReportElevator1.htm	
] EN81ReportElevator2.htm	
] EN81ReportElevator3.htm	
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] EN81ReportElevator5.htm	
] Sample-File.rtf	$\sim$
☑ View Result	
OK Cancel Help	
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4000

## Create and save an Excel Report

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EL3.1 SIMPLIFIED EXCEL REPORT

#### Exporting project values to an Excel file:

 First of all, create a new or open an existing Excel file. Afterward, add a new worksheet to this file and give it the name LD. This file will become a new template file for an Excel elevator report generated via DigiPara Liftdesigner.







Develop BIM Components

Select Dimension Objects

Select Annotation Objects

Select Component Objects

Export

Ο

Select

Options

Select

#### Select the project value in the DigiPara Liftdesigner Data Tree

Visualize

CAD Models

👩 Recalculate Project

Results

🔚 Measure

Dimensions

Ba Rope

∎<sub>1</sub> Headroom

Counterweight

Export project values **EL3.1 SIMPLIFIED EXCEL REPORT** 

Project

ÔΤ

🖬 Main Project Data

Cabin Configurator

Start

Start Design Sheet

Group and Shaft Configurator

View Frame

Guide

#### iftdesigner 🕫

#### Export project values **EL3.1 SIMPLIFIED EXCEL REPORT**

Paste the copied expression to any cell in column A in the LD worksheet. Save the Excel template file in DigiPara Liftdesigner Pool:

Formulas

E.

D

Shaft0.WIDTH

Page Layout

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С

Font

 $\times$ 

- 11 - A A

C:\ProgramData\DigiPara\dcc\DataPool\Forms 

Home

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LD

Insert

File

Clipboard 🗔

A3

1

2

Ready





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LDTrainingExample

#### Export project values **EL3.1 SIMPLIFIED EXCEL REPORT**

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

• As soon as a reference has been found, DigiPara Liftdesigner looks up the real project value for this reference in the project Data Tree and adds it to column B next to the reference expression.





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# EL3.2

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**Excel Project Integration** 





#### The Excel integration allows you:

- to view and modify Excel files in DigiPara Liftdesigner
- to transfer values from Excel back to the DigiPara Liftdesigner Project and reverse



# Docking Window: Excel Reporting

## **Docking Window: Excel Reporting**

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EL3.2 EXCEL PROJECT INTEGRATION

Only if the DigiPara Liftdesinger project is stored, the Excel Reporting docking window is activated and can be used.





## Docking Window: Excel Reporting

EL3.2 EXCEL PROJECT INTEGRATION

#### The Excel Reporting docking window allows:

- Show and edit Excel files
- Load and save Excel template files
- Transfer values to DigiPara Liftdesigner and back



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# Create and save an Excel Project Integration

### Create and save an Excel Project Integration

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EL3.2 EXCEL PROJECT INTEGRATION

The prepared DigiPara Liftdesigner Excel file already contains a sheet that is used to read and transfer values correctly.

 The saved file path of the newly created Excel report automatically depends on the location of the DigiPara Liftdesigner project file (.ld3).

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Load from templat Create a new report

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Excel Reporting

Save as template

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Jav	e as template Load from	template	
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	А	В	(
1	DTV_VARNAME	DTV_VALUE	DTV_MODE
2	Shaft0.Car.CD	1400	
3	Shaft0.Car.CW	1600	
4			
5			
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8			
9			
10			
	SyncWithLD	··· (+) : • =	÷.

# Transfer of Excel as well as DigiPara Liftdesigner Values

## Transfer of Excel as well as DigiPara Liftdesigner Values

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EL3.2 EXCEL PROJECT INTEGRATION

#### Use of DigiPara Liftdesigner references in Excel files

 The SyncWithLD sheet allows the transfer between the Excel report and DigiPara Liftdesigner





## Transfer of Excel as well as DigiPara Liftdesigner Values

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EL3.2 EXCEL PROJECT INTEGRATION

# Only after the definition of the D column (SYNC\_MODE), related to the new reference, is the associated value displayed in the B column.

- 1. Reading the current DigiPara Liftdesigner value in the Excel report
- 2. Transfering back entered Excel values to the DigiPara Liftdesigner project
- 3. (1.+2.) Reading and transfering

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3	Shaft0.Car.CW	1600	0	1		2: Write back to Liftd	esigner	_						
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L	5	Shaft0.DEPTH	1805		1									
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# Transfer of Excel as well as DigiPara Liftdesigner Values

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Only values that are directly editable in DigiPara Liftdesigner can be changed via the Excel Project Integration.

- z.B. Shaft dimensions
  - not directly editable (gray colored in edit mode)





#### Open and edit in Excel **EL3.2 EXCEL PROJECT INTEGRATION**

#### The .xls template file can be opened in Excel and extended as required.

Excel Reporting After saving and closing the edited file in Excel, it must be reloaded in DigiPara Excel-Reporting\_NewReport1.x 🗸 🕼 🛗 📕 🛛 Liftdesigner that the changes become visible. ave as template

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Shaft0.Car.CD	1400			2	Shaft dimensions													
Shaft0.Car.CW	1600			3										-				
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Reload report

Load from template

Ex E

#### **Open and edit in Excel** EL3.2 EXCEL PROJECT INTEGRATION

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#### Save the template



# Load existing external Excel files

### Load existing external Excel files

EL3.2 EXCEL PROJECT INTEGRATION

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Load an existing file as template



## Load existing external Excel files

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EL3.2 EXCEL PROJECT INTEGRATION

# For existing Excel files that have not been generated via DigiPara Liftdesigner, the SyncWithLD sheet must be added and defined subsequently.

• Example training file: Your EL3 Excel Project Integration

B7	$\bullet$ : $\times$ $\checkmark$ $f_x$						~
	А	В	с	D		E	
12 Shaft0.P	IT	1500	0	3			
13							
14 Shaft0.C	ar.CD	1400	0	3			
15 Shaft0.C	ar.CW	1600	0	3			
16 Shaft0.C	ar.HEIGHT	2000	0	3			
17 Shaft0.C	ar.CEILING	50	0	3			
18							
19 FLL.Leve	I0.DESC	FL1	0	2	2		
20 FLL.Leve	11.DESC	FL 2	0	2	2		
21 FLL.Leve	I2.DESC	FL 3	0	2	2		
22 FLL.Leve	I3.DESC	FL4	0	2	2		
23 FLL.Leve	I4.DESC	FL 5	0	2	2		
24							
25 FLL.FLL_C	COUNT	5	0	2	2		
26							
27 Shaft0.C	W.BracketList.DBG	900	0	3			
28 Shaft0.C	W.Weight.L_CWDimTab.CW_PART_NO	CWT1234	0	2	2		
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# EL3.3

Creating a drop-down list for component exchange





## Exchange of BIM components

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EL3.3 CREATING A DROP-DOWN LIST FOR COMPONENT EXCHANGE

# Exchange of BIM components in the existing DigiPara Liftdesigner project by using appropriate RID numbers.

• Example: Guide rail exchange

 $T89a = GD_RID 5$ 







## **General Information**

EL3.3 CREATING A DROP-DOWN LIST FOR COMPONENT EXCHANGE

#### **General Information**

- Each component has its own unique RID number
  - Component exchange via RID numbers in DigiPara Liftdesigner through the properties window

Entering different RID numbers for exchange

Properties	<b>д Х</b>	Data tree
Lock Update Guide rail 0 [Guide	0.]	🕀 🖷 🖁 Buffer Support 0 [BufferSupport0.
✓ [0010] Tools		
Component state	Active	Buffer Support 2 [BufferSupport2.
<ul> <li>(0020) General</li> </ul>		Buffer Support 3 [BufferSupport3.
Manufacturer	Common components	🗈 📲 Components [Components.]
Designation	Т 90/В	🖨 📲 🕻 Guide rails [GuideList0.]
Type	diagonal base machined	Components [Components.]
<ul> <li>[0022] Project Level Ger</li> </ul>	metry Information	
Create geometry	By parent	⊕■C Force 1 [Force1.]
Create geometry status	Create	🖶 📲 🖁 Guide rail 0 [Guide0.]
Create geometry status	create	Guide rail 1 [Guide1.]
Grouping	Modify with group	
Loft and right guide list	Similar count and lengths	⊕ • C Guide rail 3 [Guide3.]
Leit and right guide list	similar count and lengths	Guide rail 4 [Guide4.]
> [0300] Number and Spa	cing	Hole 0 [Hole0.]
> [0365] Guide Kall		
> [0410] Ceiling nole opti	ons	BOTTOM_CLR = 50
> [3635] View Frame Sett	ngs	DEFAULTLEN = 5000
> [3805] Render		DIM100 = 75
<ul> <li>[4210] Product Adminis</li> </ul>	tration	➡ DIM101 = 0
Object name	LDXGuide, idGuide	DISALLOWED = 0
RID	12	• MIN_LEN = 1000
PG_GRP	19281	
		VIEICUT = 0
		WEIGHT = 0

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## Specifying the source data

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EL3.3 CREATING A DROP-DOWN LIST FOR COMPONENT EXCHANGE

#### Example of creating a list for component exchange

Specifying the source data



## Define the function

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EL3.3 CREATING A DROP-DOWN LIST FOR COMPONENT EXCHANGE

#### Define the function to be performed

Defining the RID numbers for the component exchange in DigiPara Liftdesigner 

Data 🗸 🗒 🛛 🖓 Edit Links	Stocks Ocography	× A↓	😽 Advanced	Columns 🗟 🕆 🚺	Analysis 🖌 Sheet	×
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27 Shaft0.CW.BracketList.DBG	900	0	3			
28 Shaft0.CW.Weight.L_CWDimTab.CW_PART_NO	CWT1234	0	2			
29						
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30 Shaft0.CW.BracketList.RBL_MODE	2	0	2 0 = automatical	lly		
31 Shaft0.CW.BracketList.COUNT	9	0	2 RBL_MODE!			
32 Shaft0.CW.BracketList.Bracket0.DIST	1300	0	2			
33						
34 Shaft0.CW.BracketList.AR_COUNT	2	0	2			
30						
36 Shaft0.Car.Frame.GuideList0.	5	0	2 Component ex	change		
37 shaitu.car.Frame.GuideList1.	Ð	A	2 synchronized			
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SyncWithLD NPUT Title block	Calculations BIM C	omponents	🕂 : 📢			•
Ready 🖗 Accessibility: Investigate					── - ──	

# EL3.4

### After Training Practice





## Define your own Excel file for Project Integration

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EL3.4 AFTER TRAINING PRACTICE

#### Recommended workflow

- Define a project with the most important main characteristics via the shaft wizard.
  - e.g. counterweight position and machine room position or MRL
- Create a new Excel template via the Excel Reporting docking window
  - Saving the Excel template file
- Extend the created template file by adding further sheets
  - For a better overview for different input areas, e.g. title block data
- Link necessary DigiPara Liftdesigner references
  - from the data tree

# EL3.5

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.

training@digipara.com



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