Product Loading: Drives



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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.

Agenda

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PL5.1 Preparation Steps

• Preparing the Datamanager

PL5.2 Overview of Rows and Columns

- Referencing sub object
- Gear performance records

PL5.3 Practice: Create a Traction Machine

- Creating a new profile group
- Load your edited BIM Component
- Load the Developer Work Area
- Modify the simplified 3D Geometry
- Save the BIM Component back into the DigiPara
 BIM Library

Agenda

PL5.4 Traction Sheave Group

- Creating the traction sheave
- Assigning the traction sheave group to the traction machine

PL5.5 Traction Sheaves and Gear Performance

Adapting the gear performance records

A5.6 <u>Summary</u>

Custom Q&A's

PL5.1

Preparation Steps





Preparing the Datamanager

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PL5.1 PREPARATION STEPS

... for adding the Traction Machine Data



PL5.2

Overview of Rows and Columns

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General Information PL5.2 OVERVIEW OF ROWS AND COLUMNS

111

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Liftd	esigner Datamaı	nager: Drag a coli	umn header here to group	by that column					
	GA_RID	GA_DESC	GA_SUB_DESC △	GA_MF_RID	GA_GP_GRP	GA_PG_GRP	GA_GFR_RID	GA_PUD_DIST	GA_PUD_DZ
•	7500000	Description	Sub-Description	7500000	0	0	-1	350	0

Some of the parameters are used for the traction machine profile creation later on.



Add..

L_GearArtTab

Referencing Sub Objects

Page - 10 -May 23, 2024

Referencing Sub Objects

PL5.2 OVERVIEW OF ROWS AND COLUMNS

Sub objects are components, loaded automatically with the created component.

Each column specifies the default...

If a "0" value is used:

- the specific component is not required
- the component will be set inactive in the final model

If the value "-1" is used

- it means "no operation"
- the component typically is determined by another component



GA_PUT_BASE_ID

... bearing block (obsolete)

GA_BB_RID

... traction sheave

group

GA PUD DZ

0

350

GA PU B

120

Liftdesigner Datamanager: Drag a column header here to group by that column

GA_GFR_RID GA_PUD_DIST

... gear frame

-1

L_GearArtTab

Add.

raction Machines

GA_PG_GRP

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... hand wheel

(obsolete)

GA_HW_RID

GA BB DIST

0 0

✓ Gear Performance Records

Gear Performance Records

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PL5.2 OVERVIEW OF ROWS AND COLUMNS

A Gear Performance Group can contain different performance records for a single traction machine

ifidesigner Datamanager: Drag a column header here to group by that column. gear performance GA_RID GA_DESC GA_SUB_DESC △ GA_MF_RID GA_GP_GRP group 7500000 Description 7500000 7500000 1	Fraction Machines 🗙	
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L_Ge	arPerformanceTab															
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PL5.3

Practice: Create a Traction Machine





Creating a new Profile Group

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PL5.3 PRACTICE: CREATE A TRACTION MACHINE

... in DigiPara Liftdesinger Datamanger

Traction Machine	s 🗙									
Liftdesigner Da	atamanager: [Drag a colu	ımn header here t	o group by that colum	n.		_			
GA_RID		DESC	GA_SUB_DE	SC GA_MF_RID	GA_GP_GRF	GA_PG_0	RP GA_GFR_RID	GA_PUD_DIST	GA_PUD_	DZ
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					Group to co	opy				
					C By num	ber				
					Number		19617			
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					C By man	utacturer				
•					Manufac	turer	Common components (1)		-	•
Add L_Ge	arArtTab				Group:	Γ	PGGRP: 19617		-	
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Adding the first Traction Machine Profile

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PL5.3 PRACTICE: CREATE A TRACTION MACHINE

... via DigiPara Liftdesigner Datamanager

Lifdesigner Datamanager: Drag a column header here to group by that column. GA_RID A GA_DESC GA_SUB_DESC GA_MF_RID GA_GP_GRP GA_PG_GRP GA_GFR_RID GA_PUD_DX 2 7500000 Description 7500000 7500000 7500000 7500003 -1 350 00 Profile group Profile group Profile group Profile group Profile group Profile group Profile type Add LGearAntTab Profile type I Profile I Pr	Traction Machines 🛛 🛫									Table view		Р X
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Load your edited Product

PL5.3 PRACTICE: CREATE A TRACTION MACHINE

... in DigiPara Liftdesigner



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Load the Developer Work Area

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PL5.3 PRACTICE: CREATE A TRACTION MACHINE



Modify the simplified 3D Geometry

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PL5.3 PRACTICE: CREATE A TRACTION MACHINE

... in DigiPara Liftdesigner

- Change profile type, size, position
- Change further profile options
- Use 3D component parameters



perties		<u></u> 4 3	Α.
k Update Profile 0 [Profile0.]			
[0010] Tools			~
Component state	Active		
[0515] Type			
Shape	Flat steel		
[0516] Size			
DX [mm]: PDX = 330	330		
DY [mm]: PDY = 500	500		
DZ [mm]: PDZ = 330	330		
S [mm]	0	_	
T [mm]	0		
[0517] Position			
X0 [mm] = 0	0		
Y0 [mm] = -350	-GA_PUD_DIST		
Z0 [mm] = 0	0		
[0519] Options			
Sub-components	-1		
Details	7		
Mode	0		
Show sub objects	No		
Manufacturer ID	0		
Component	Shaft0.Gear.		
Profile Matrix	Open dialog		
[0520] 3D Parameter			
[0]: TRACTIONSHEAVE_PUD_B	100		
[1]: DZ	0		
[2]: EXT_Z_TOP	200		
[3]: EXT_XL	250		
[4]: EXT_XR	250		
[5]: EXT_YR	120		
[6]: EXT_YL	0		
[9]: GA_PUD_DIST	350		v
	prefries kt Update Profile 0 [Profile0.] [0010] Tools Component state [0515] Type Shape [0516] Size DX [mm]: PDX = 330 DX [mm]: PDY = 500 DZ [mm]: PDY = 500 DZ [mm]: PDY = 330 S [mm] T [mm] [0517] Position X0 [mm] = 0 Y0 [mm] = -350 Z0 [mm] = 0 [0519] Options Sub-components Details Mode Show sub objects Manufacturer ID Component Profile Matrix [0520] 3D Parameter [0]: TRACTIONSHEAVE_PUD_B [1]: DZ [2]: EXT_Z_TOP [3]: EXT_XL [4]: EXT_XR [5]: EXT_YR [5]: EXT_YR [6]: EXT_YL [9]: GA_PUD_DIST [9]: GA_PUD_DIST	profile 0 [Profile0.] [0010] Tools Component state Active [0515] Type Shape []] Flat steel [0516] Size DX [mm]: PDX = 330 330 DY [mm]: PDY = 500 500 DZ [mm]: PDZ = 330 330 S [mm] 0 T [mm] 0 [0517] Position	perties + / k Update Profile 0 [Profile0.] [0010] Tools Active Component state Active [0515] Type

Adding a new Profile PL5.3 PRACTICE: CREATE A TRACTION MACHINE

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Changing the Profile Size

PL5.3 PRACTICE: CREATE A TRACTION MACHINE

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PLANETRY GEARING/ GEAR IN SHAFT

Direction of View

Properties **Ψ** X Profile 1 [Profile1.] Lock Update [0010] Tools Depth and location of the traction sheave . – Ξ Component state \sim Active [0515] Type shaft depends on the width of the traction Cylinder Shape [0516] Size sheave and on the distance between the DX [mm]: PDX = 50 -0.5*TRACTIONSHEAVE_PUD_B - 250 + GA_PUD_DIST Parameters are explained in DY [mm]: PDY = 0 traction sheave and the motor. 150 DZ [mm]: PDZ = 150 the developer dwg files. S [mm] 0 T [mm] 0 [0517] Position X0 [mm] = 0 0 Y0 [mm] = -75 -0.5*TRACTIONSHEAVE PUD B - 0.5*PDX Z0 [mm] = 0 0 [0519] Options Sub-components -1 Details Mode 0 Show sub objects No Manufacturer ID Z Shaft0.Gear Component Profile Matrix Open dialog.. [0520] 3D Parameter [0]: TRACTIONSHEAVE_PUD_B 100 [1]: DZ 0 [2]: EXT_Z_TOP 200 [3]: EXT_XL 250 [4]: EXT_XR 250 120 [5]: EXT_YR [6]: EXT YL 0 Parameter [1] = GA_PUD_DZ 350 [9]: GA_PUD_DIST

... via constant values ... via rules consisting of component parameters & constant values

Using the 3D Parameter PL5.3 PRACTICE: CREATE A TRACTION MACHINE

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... for the profile size and position

• You can insert parameter values a follows:



Changing related Parameter Values

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PL5.3 PRACTICE: CREATE A TRACTION MACHINE

... e.g. the Traction Sheave Width



Save this BIM Component back

PL5.3 PRACTICE: CREATE A TRACTION MACHINE

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Updating / saving the modifications in the DigiPara Liftdesigner Datamanager after developing a simplified geometry in DigiPara Liftdesigner.



database

Let's have a break!

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PL5.4

Traction Sheave Group





Creating the Traction Sheaves

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PL5.4 TRACTION SHEAVE GROUP

... e.g. with diameter 350 and 400 mm

... each type with 2 different widths



Preparing the DigiPara Liftdesinger Datamanager

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PL5.4 TRACTION SHEAVE GROUP

... for the Sheaves

Sheaves 🗙											
Liftdesigner Datamanager: Drag a column header here to group by that column.											
iamma_def put	_GROOVE_TYPE	PUT_GROOVE_TYPE_POSSIBLE	PUT_WEIGTH	PUT_TYPE	PUT_MODE	PUT_ROPE_D_MIN	PUT_ROPE_D_DEF	PUT_ROPE_D_MAX	PUT_		
0 0		0	0	0: Traction	0	8	10	13			
PUD_BEAR_RID	PUD_J_KGM2△ 0 0										
iamma_def put	_GROOVE_TYPE	PUT_GROOVE_TYPE_POSSIBLE	PUT_WEIGTH	PUT_TYPE	PUT_MODE	PUT_ROPE_D_MIN	PUT_ROPE_D_DEF	PUT_ROPE_D_MAX	PUT_		
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PUD_BEAR_RID	PUD_BEAR_RID PUD_J_KGM2 0 0 0 0 0 0										

Assigning the Sheave Group to Traction Machine

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PL5.4 TRACTION SHEAVE GROUP

... via the GA_PUT_BASE_ID column



PL5.5

Traction Sheaves and Gear Performance

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Adapting the Gear Performance Records

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PL5.5 TRACTION SHEAVES AND GEAR PERFORMANCE

... for the two different traction sheaves diameters in the new referenced traction sheave group

Ţ,	DigiPara Liftdesigner Datamanager 2017	– 🗆 X
Home Options		
Standard Data Pool [C:\ProgramData\DigiPara\2017\dcc\DataPool\Data\LD50.mdf]	🔜 🦻 🛓 gear performance 🚶 🔹 🚔 🧱 🖬 🦉]
75:LD-Developer	group ize 🚰 Column 🖬 Table	B Help
Edit Database Settings	Grid Raws Grid Cells View Grid Window	
Sheaves Traction Machines 🗶	Table vie	ew ȚX
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► 7500000 Description Sub-Description 7500000 7	00000 7500003 120 7500000 0 · · · · · · · · · · · · · · · ·	Entrances
L GearPerformanceTab		
GP_RID GP_GRP GP_X GP_DESC	GP_ETA GP_V GP_PU_DIA△ GP_RATIO_1 GP_RATIO_2 GP_RATIO_TEXT GP_N	GP_P G
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	existing period	prmance
	records for the	two new
	traction sheave	diameters.
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A possible Result in DigiPara Liftdesigner

PL5.5 TRACTION SHEAVES AND GEAR PERFORMANCE

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Ψ X

Properties



... after exchanging the Traction Machine

A possible Result in DigiPara Liftdesigner

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PL5.5 TRACTION SHEAVES AND GEAR PERFORMANCE







PL5.6

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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