Drawing Creation Fundamentals



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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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A3.1 View Frames & Section Planes

- Creating new views & different view types
- Views types & direction
- Positioning & base point
- Section plane position
- Component and dimension visibility
- Prototype DWG

A3.2 Special View Types

- Simply detail section
- Rule based detail section
- Testing the defined rules
- Saving view frames (*.ldf)
- Vertical Split
- Symbolic Vertical Sections

Agenda

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A3.3 Sheet & Sheet Templates

- Creating a new sheet
- Renaming a sheet
- Copying existing view frames
- Loading a Drawing Border & Title Block
- Saving sheet templates
- Loading sheet templates (+ shaft wizard)

A3.4 <u>Annotations</u>

- Active View Frame Annotations
- Active Component Annotations
- Extended Annotation Settings

Agenda

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A3.5 Data Tree & Project References

- Data Tree Structure
- Project Specifications
- Elevator Project Values
- Copying External\$'s from the Data Tree

A3.7 External Blocks (AutoCAD DWG's)

- Referencing External\$ in DWG's
- Loading external Blocks
- Go to External

A3.6 EXTERNAL\$'S

- Syntax & External\$ Expressions
- Special Values/Operations (Calculations with External\$'s, etc.)
- Examples Special Values/Operations

A3.8 Title Blocks & Drawing Border

- Meaning of titl_ prefix
- Meaning of bord_ prefix
- Standard DWG Directory



A3.9 After Training Practice

- View Frames & Sheets
- Special View Types
- Annotations
- Project References
- Special View Types

A3.10 Summary

Custom Q&A's

Preparation Steps

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
- Machine room
 - Below / left
- Car roping
 - 2 pulleys below
 - with CW safety gear
- Counterweight roping, left
 - 1 rope pulley 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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A3.1

View Frames & Section Planes



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View Frames & View Types

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A3.1 VIEW FRAMES & SECTION PLANES

Creating new views & different view types

- Via the View Frame tab & group
 - always add a new plan view to the drawing by default
- Deleting views via the DEL key or the Remove View Frame option under the View Frame tab
 - under the View Frame group





General Information A3.1 VIEW FRAMES & SECTION PLANES

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Changing view types

via the View Frame tab under the Type group



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Rotate vertical sections



Vertical Scale: 1:50



Vertical Scale: 1:50

Modify the entrance details via the corresponding view frame properties

- Location
- Visible distance above/below entrance



Enable section plane

Views types & direction A3.1 VIEW FRAMES & SECTION PLANES

Rotate the entrance details via

Option 1 : View Frame Properties

No

Option 2 : View Direction group





Detail outside Scale: 1:20



Floor Level Type

- Define floor level types for untypical floors
- View frame properties: select the floor to be shown





0

Entrance front

Detail outside

Scale: 1:20

0

Default (opposite to CW)

Main Entrance Level

LDXSheetFrame, idSheetFrame

View 2

 $\langle \rangle$

No

Floor Level Type

Views types & direction

A3.1 VIEW FRAMES & SECTION PLANES

Even if the main floor changes, the view frame is updated immediately if this is set correctly in the properties.

Floor Level Types Bank 1 Project Floor Type Floor Type Level 4 w 6800 3 W 3000 Main Floor *§* **v** W -3000 0 User Type 2 Floor § 🔻 **Evacuation Floor Bank 1** *§* **v** -5900



Positioning & Base Point A3.1 VIEW FRAMES & SECTION PLANES

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Positioning view frames on the drawing

- Can be positioned relatively to the sheet basis point via the XO and YO properties
- The sheet basis point is specified by the lowest left point of the geometry in the drawing area

Pro	operties	д 3					
Loc	k Update Sheet frame 5 [Ldv	/Frame5.]					
×	[2001] Level of Development (LOD)						
	Representation	Default (by Sheet)					
×	[3611] Hatch						
	Show hatch	Yes					
	Show fake hatch	No					
	Expose hidden materials	Yes					
	Angle	45					
	Scale	50					
	Pattern	LINE					
	Classic material hatching	Type and scale by document					
-	[3612] Basis Point						
I	X0 [mm]	510					
I	Y0 [mm]	100					
÷	Scale value	1.20					
	X origin	Car BP					
	Y Origin	Bottom edge of the geometry					
	Symbol scale factor	0.05					
	Symbol scale calculation	Automatically					
	Rotation	'0°					
¥	[3613] Detail section						
	Detail section	No					
	Diel, Mitelessen Diel, Mitelesse						

Positioning & Base Point A3.1 VIEW FRAMES & SECTION PLANES

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Select view frame and move mouse to the corner to see the symbol, then view frame can move it by holding down the left button with the mouse.



View Frame Rotation

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View Frame Rotation via Properties

Aktualisierung sperren Sheet frame 2 [LdvFrame2.] Angle 45 Scale 50 Pattern LINE Classic material hatching Type and scale by document Profile Center Lines Show V [3612] Basis Point X0 [mm] 93 Y0 [mm] 101 Scale value 1 : 50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° I [3613] Detail section '0° Detail section '90° I [3620] Vertical positions in thi '180°	Pro	operties			д
Angle 45 Scale 50 Pattern LINE Classic material hatching Type and scale by document Profile Center Lines Show (3612) Basis Point 3 X0 [mm] 93 Y0 [mm] 101 Scale value 1 : 50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° I [3613] Detail section '0° Detail section '90° Y [3620] Vertical positions in thi '180° Car position '270°	Akt	ualisierung sperren	Sheet frame 2 [Ldv	/Frame2.]	
Scale 50 Pattern LINE Classic material hatching Type and scale by document Profile Center Lines Show V [3612] Basis Point X0 [mm] 93 Y0 [mm] 101 Scale value 1 : 50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° [3613] Detail section '0° Detail section '90° [3620] Vertical positions in thi '180° Car porition '270°		Angle		45	
Pattern LINE Classic material hatching Type and scale by document Profile Center Lines Show Image: Strain Strai		Scale		50	
Classic material hatching Type and scale by document Profile Center Lines Show (Interpretent of the second of t		Pattern		LINE	
Profile Center Lines Show (3612) Basis Point 93 X0 [mm] 93 Y0 [mm] 101 Scale value 1:50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° Detail section '90° [3620] Vertical positions in thi '180° Car position '270°		Classic material h	atching	Type and scale by document	
 [3612] Basis Point X0 [mm] 93 Y0 [mm] 101 Scale value 1 : 50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° [3613] Detail section '0° Detail section '90° [3620] Vertical positions in thi '180° '270° 		Profile Center Line	es	Show	
X0 [mm] 93 Y0 [mm] 101 Scale value 1:50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° V [3613] Detail section Detail section '180° Car positions '180°	~	[3612] Basis Poi	nt		
Y0 [mm] 101 Scale value 1:50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° V [3613] Detail section Operation '180° Car positions '180°		X0 [mm]		93	
Scale value 1:50 X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° Detail section '0° Detail section '90° '3620] Vertical positions in thi '180° '270° '270°		Y0 [mm]		101	
X origin Left edge of the geometry Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° V [3613] Detail section '0° Detail section '90° V [3620] Vertical positions in thi '180° Car position '270°		Scale value		1:50	
Y Origin Bottom edge of the geometry Symbol scale factor 0.02 Symbol scale calculation Automatically Rotation '90° V [3613] Detail section Detail section '90° V [3620] Vertical positions in thi '180° Cor position '270°		X origin		Left edge of the geometry	
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Symbol scale calculation Automatically Rotation '90° [3613] Detail section Detail section '90° [3620] Vertical positions in thi '180° Car position '270°		Symbol scale fact	or	0.02	
Rotation '90° V [3613] Detail section Detail section '0° V [3620] Vertical positions in thi '180° Cor position '270°		Symbol scale calo	ulation	Automatically	
 [3613] Detail section '0° Detail section '90° [3620] Vertical positions in thi '180° Cor position '270° 		Rotation		'90°	\sim
Detail section '90° [3620] Vertical positions in thi '180° Corr position '270°	~	[3613] Detail se	ction	'0°	
 [3620] Vertical positions in thi Car position '270° 		Detail section		'90°	
Car position 1270°	~	[3620] Vertical p	positions in thi	'180°	
		Car position		'270°	



Cross Section Overhead Scale: 1:20

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View Frame Scale A3.1 VIEW FRAMES & SECTION PLANES

Scale View Frames via Properties

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Section plane positions A3.1 VIEW FRAMES & SECTION PLANES

For setting up own section plane positions the status of the Enable section operation must be **Yes**.

Properties

Determine the section plane reference point and define the corresponding section plane dimension value.

.oc	k Update	Sheet frame 5 [LdvFrame5.]		
	Counterwe	ight ghost position	Default (opposite to CW)	^
~	[3621] Di	mensions		
	Settings		Default (by Sheet)	
	Extension	Lines	Default (by Sheet)	
	Dimension	chain description visible	Default (by Sheet)	
	Dimension	chain description location	Default (by Sheet)	
,	[3622] CI	ipping Plane		
	Car sectio	n clipping plane relative	Default (0.9 * car height)	
	Car sectio	n clipping plane distance [mm]	500	
/	[3623] Di	mension Groups		
	Dynamic li	ist	\diamond	
1	[3624] Sh	aft section		
	Enable se	ction plane	Yes	\sim
-	Section pla	ane reference point	Displayed Floor Level	
	Section pla	ane DZ	1100	
~	[3625] PI	an View		_
	Show floor	(Plan View)	Show all entries	
	Show scaf	folding number	0	
	View Direc	ation	from top	
~	[4210] Pr	oduct Administration		
	Object nar	ne	LDXSheetFrame, idSheetFrame	
~	[4220] De	eveloper		
	Developer	section	No	
	Developer	name		
	14000101	e e		×

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A3.1 VIEW FRAMES & SECTION PLANES

Switching on/off BIM components

via the View Frame tab

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6 Switch

- Component
 - local per

w Frame tab	■ H H F LOD LOD LOD LOD LOD S50	LOD LOD LOD 400 500 MAX			
	View Frame Dimensions	Visualize CAD Models	Develop BIM Co	omponents Export	Options
t Visibility group	🔣 Remove View Frame			<u>•</u> • □ ₩₩Σ	🙊 🛄 🔲 🔛 Bank 1
r view frame operation	${f A}$ Active View Frame Annotation		0000	🔍 🔍 🕹 🕹 📜 🔍	🖹 🗰 💽 🔚 Bank 2
	View Frame Overwrites	from Left [1] 🕅		G 🗞 🎯 💆 🛽	
	View Frame	Туре	View Direction	Component Visib	vility Visibility
ched off car nd door mponents		Switched on car and door components.		PLW 1650 BG 1700 CW 1600 200 10356 CW 1600 200 10356 CW 1600 CW 1000 CW 1000	Shaft Groups & High Rise

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A3.1 VIEW FRAMES & SECTION PLANES

Switching on/off BIM components

Deactivating single BIM components via the Component state property



A3.1 VIEW FRAMES & SECTION PLANES

Reactivating BIM components via the corresponding component data tree node / item



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A3.1 VIEW FRAMES & SECTION PLANES

Switching on/off BIM components & dimensions

Reactivating BIM components via the corresponding component data tree node / item



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A3.1 VIEW FRAMES & SECTION PLANES

Switching on/off BIM dimensions

- via the Dimensions tab
- **Dimensions group**
 - local per view frame operation



Project

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Switch

Sheet

Start

Design

Start

View Frame

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Dimensions

Extension

View Frame Layout

The table2000.dwg file is automatically embedded in the standard Liftdesigner program

Sreadcrumb	Ф.Х.										
Document, Sheets.											
Favoriten				Ŧ	dwg			Bildto	ols		- 0
Eigenschaften	ф X		Datei	Start	Frei	geben	Ansicht	Verwal	ten		
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Maßeinheit	Metrisch				Cache			Name			Тур
Größeneinheit	mm				CADmo	del			t13.dwg		DWG-Datei
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Projekteinheit	Metrisch							🔊 Idrx0	7.mnu		AutoCAD Menu T.
 [0100] Einstellungen 					data			🔊 Idrx10	0.mnu		AutoCAD Menu T
Zeichnungssprache	German - Standard - [1031]				develop	er	- E.		4	_	AutoCAD Menu T
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Prototyp-DWG	C:\ProgramData\DigiPara\2018\dcc\DataPool\dwg\Tables2000.dwg				awg				szooo_impa	awg	DwG-Datei
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Ansichtsart	Entwurfsmodus				PGNode	s		🐸 Table	sAM_Imp.d	dwg	DWG-Datei
 [2001] Fertigstellungsgrad (L 	OD)			_	Destants		¥ .	<			
Darstellung	LOD 400	-	13 Eleme	nte	1 Elemer	nt ausgew	ählt (141 K	(B)			
Max. Exemplar Anzeigemodus	Polygone	1.1									
 [3615] Bemaßungen 	12										
Maishiltslinien	Kurz										
Einstellunden	Default (von der Prototyp-DWG)										
(4010) D - 4 4 - 4 - 5 - 5 - 6 - 6											
 [4210] Produktadministration 	LDVChasta HChasta	1									

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View Frame Layout

• contains predefined Dimension Style, Blocks and Text Style configurations as well as the default Layers



A3.2

Special View Types



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General information

A3.2 SPECIAL VIEW TYPES

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Simple detail section



Rule based detail section



Vertical Splits



Symbolic vertical sections





Simple detail section

Edit an existing view frame



2. Specifying the section via the view

Simply detail section A3.2 SPECIAL VIEW TYPES

Note:

• The detail section mode can be reset via the view frame Detail section property



Rule based detail section

Rule based detail section

A3.2 SPECIAL VIEW TYPES

Starts with adding a simple detail section



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Rule based detail section

A3.2 SPECIAL VIEW TYPES

Note:

 When a dimension (CW) is changed in the X-direction, the detail section will be deformed since the static dimensions that make up the detail section remain constant.


Rule based detail section

A3.2 SPECIAL VIEW TYPES

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Use of the shaft dimension in X-direction

• to define a dynamic rule for the size of the detail selection box



Rule based detail section

A3.2 SPECIAL VIEW TYPES

Reference object of dynamic section size rule can be set individually

Default setting = World coordinates

Y [3614] Rule Based Detail Section	m: X Min
Reference Object (1)	World coordinates
Reference Treename (1)	Document.
Rule rel. to Ref Object (1)	-LD("Me.Shaft0.W_3")
Pick Point (1)	Pick Point
World coordinate (1)	-200
(3015) Rule Based Detail Section	л. Х-імах
Reference Object (1)	World coordinates
Reference Treename (1)	Document.
Rule rel. to Ref Object (1)	LD("Me.Shaft0.WIDTH")+LD("Me.Shaft0.W_4'

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Using the rule editor: X-Min

A3.2 SPECIAL VIEW TYPES

Rule based detail section

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🔡 DigiPara Liftdesigner 2022 - Project tree _ × DigiPara Liftdesigner Project file 🖮 📲 🖫 Beams -1 [BeamList.] 🔓 FIOOT IEVEIS [FLL.] ✓ [3615] Rule Based Detail Section: X-Max FOICES [FOICELIST Reference Object (1) World coordinates -E Shaft 0 [Shaft0 Reference Treename (1) Docu . Components [Components.] LD("Me.Shaft0.WIDTH")+LD("Me.Shaft0.W_4") Rule rel. to Ref Object (1) Pick Point... (1) Pick Point... POT_Z = -1200 SHAFT HEAD PLANE DZ = 0 3180 World coordinate (1) W_1 = 200 Rule source Rule - [Double] W 2 = 200 LD("Me.Shaft0.WIDTH")+LD 5 W 3 = 200 ("Me.Shaft0.W 4") 2 Imports System.Math 3 Imports DigiPara.LDX W 4 = 200 4 1 Imports System.Reflection > W O = 200 Imports DigiPara.LD.Custo > W U = 200 6 Imports Microsoft.VisualB 8ML 7 WIDTH = 2980 Public Class RuleEval LD("Me.Shaft0.WIDTH")+LD("Me.Shaft0.W_4") :Implements DigiP X0 = 0 Can be made simple mathematical calculations shaft base point

Rule based detail section A3.2 SPECIAL VIEW TYPES

Using the rule editor: X-Max

Rule based detail section

A3.2 SPECIAL VIEW TYPES

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Testing the defined rules

Rule check by changing the CW dimension





Rule based detail section

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A3.2 SPECIAL VIEW TYPES

Saving view frames (*.ldf)

- into the data pool directory under sheets by creating a new folder : MyViewFrames
- View frames are saved with all the individual settings and can be loaded into any further project.







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Vertical splits for vertical section views and 3D views

Via view frame properties -> Detail section





Vertical Splits A3.2 SPECIAL VIEW TYPES

Vertical Splits Settings

• Split Count: how often to split the vertical view

Scale:

Show: which split to display

	Pro	perties	
	Loc	k Update Sheet frame 3 [LdvFrame3.]	
	~	[3613] Detail section	
	Ι.	Detail section	Vertical Split
		Split Count	3
		Show	Split 2
	~'	[3614] Vertical Splits	
		Additional Split DZ Bottom [mm]	500
		Split Z0 Bottom [mm]	7100
		Additional DZ Top [mm]	500
		Split Z0 Top [mm]	10100
X ^{SD = 1960}		Z0 Start [mm]	-200
M		Z0 End [mm]	18100
Vertical Scale: 1:50		Typical Split Height [mm]	6100
Scale. 1.50		Max. Split Height Extension [mm]	5000



Vertical Splits A3.2 SPECIAL VIEW TYPES

Vertical Splits Settings

- Additional Split in z-direction
- Maximum split height extension

3

2

Vertical Scale: 1:50

Pro	perties	
Loc	k Update Sheet frame 3 [LdvFrame3.]	
~	[3613] Detail section	
	Detail section	Vertical Splits
	Split Count	3
	Show	Split 2
 ~	[3614] Vertical Splits	
	Additional Split DZ Bottom [mm]	1000
	Split Z0 Bottom [mm]	7100
	Additional DZ Top [mm]	1000
	Split Z0 Top [mm]	10100
	Z0 Start [mm]	-200
	Z0 End [mm]	18100
	Typical Split Height [mm]	6100
	Max. Split Height Extension [mm]	5000

Symbolic Vertical Sections

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Symbolic Vertical Sections

A3.2 SPECIAL VIEW TYPES

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Vertical

Scale: 1:50

view first

Creating a symbolic representation via the view frame properties

Lock Update Sheet frame 10 [Ld [3621] Dimensions Settings Extension Lines Default (by Sheet) Dimension chain description visible Dimension chain description location Default (by Sheet) [3622] Clipping Plane Car section clipping plane relative to the car center Car section clipping plane distance [mm] 500 [3623] Dimension Groups Dynamic list \diamond [3624] Shaft section Enable section plane No [3626] Vertical Section mbolic representatio No Upper visibility per floor [mn Lower visibility per floor [mm] 500 250 Distance between blocks [mm] [4210] Product Administration LDXSheetFrame, idSheetFrame Object name [4220] Developer No Developer section Developer name [4230] Statistics 0.0438482 sec

2/2/

2. Changing the value of the view frame Symbolic representation property to Yes

1. Selecting a vertical Last Build Duration Last Number of Polynone

Frame10.]		
		^
	Default (by Sheet)	
	Default (by Sheet)	

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Symbolic, vertical section

Scale: 1:50

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	\sim	[3621] Dimensions	
		Settings	Default (by Sheet)
		Extension Lines	Default (by Sheet)
		Dimension chain description visible	Default (by Sheet)
		Dimension chain description location	Default (by Sheet)
×	~	[3622] Clipping Plane	
		Car section clipping plane relative	to the car center
		Car section clipping plane distance [mm	500
	~	[3623] Dimension Groups	
		Dynamic list	\diamond
	\sim	[3624] Shaft section	
		Enable section plane	No
	~	[3626] Vertical Section	
		Symbolic representation	Yes
		Upper visibility per floor [mm]	500
		Lower visibility per floor [mm]	500
		Distance between blocks [mm]	250
	~	[4210] Product Administration	
		Object name	LDXSheet name, idSheetFra
	~	[4220] Developer	
		Developer section	No
		Developer name	
	~	[4230] Statistics	
			0.0401004

Lock Update Sheet frame 10 [LdvFrame10.]

Changing the Upper and Lower visibility per floor and the distance btw. the vertical section blocks

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A3.3

Sheets & Sheet Templates



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General Information A3.3 SHEETS & SHEET TEMPLATES

- One elevator = One data model
- Unlimited number of layouts



Creating a new sheet A3.3 SHEETS & SHEET TEMPLATES

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Option 1

- can be added via the Sheet tab
 - Sheet group



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to Typical Views For Your Elevator



• A new sheet can be added also from the section where the pages at the bottom are sorted

Creating a new sheet

Removing a new sheet A3.3 SHEETS & SHEET TEMPLATES

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Removing options



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Can be renamed via the Sheet properties

- Displaying the corresponding properties via the Sheet tab
- Tip: In the drawing area, the drawing sheet properties can also be opened via the right mouse button

	Properties	д X
	Lock Update Sheet 3 [LdvSheet3.]	
(;;;) \ 🔂 🛷 💟 🖬 🎢 🔽 🖸 🛄 🖻 🖼 🖽 🖻 🖉	 [0600] General 	
Start Project Sheet View Frame Din	Current page number	
	Add to the page count No	
🛛 🥂 🚕 📑 🖻 Remove Sheet 🔄 🛄 🖳 Save	Total number of pages 0	
💷 🏸 Keet Properties	Page name New	Sheet 0
Start Design Add	Tide block	
Page Mode Sheet Sheet 🖾 Loa	Drawing border	
Standard Sheet Shee	Selected for plot No	
	Paperspace Margin 5	
	Visible shaft	All
	 [2001] Level of Development (LOD) 	
	Representation Defau	ult (by Sheets)
	 [3615] Dimensions 	
	Extension Lines Defau	ult (by Document)
	Settings Defau	ult (by Document)

Copying existing View Frames A3.3 SHEETS & SHEET TEMPLATES

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Copying view frames from one sheet into another

- 1. Selecting the view frame to be copied via the left mouse button.
 - Multiple view frames can also be copied at once



Copying existing View Frames A3.3 SHEETS & SHEET TEMPLATES

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LOD LOD 500 MAX

CAD Model

Develop BIM Con

Loading a Drawing Border

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A3.3 SHEETS & SHEET TEMPLATES

Can be loaded via the Sheet properties

No

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TrainingExample

Default (by Sheets)

bord_2h.dwg

The sheet properties get displayed via the Sheet tab

Ψ ×

Sheet group

Sheet 3 [LdvSheet3.]

[2001] Level of Development (LOD)

Properties

Lock Update

[0600] General

Page name

Drawing border

Selected for plot

Representation

Visible shaft

~

Paperspace Margin

Title bleek

Current page number

Add to the page count

Total number of pages



Loading a Title Block A3.3 SHEETS & SHEET TEMPLATES

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Can be loaded via the Sheet properties

- The sheet properties get displayed via the Sheet tab
 - Sheet group

[0600] General	
Current page number	
Add to the page count	No
Total number of pages	0
Page name	Training Example
Title block	titl_rop_int.dwg
Drawing border	bord_2h.dwg
Selected for plot	No
Paperspace Margin	5
Visible shaft	All
[2001] Level of Develo	opment (LOD)
Representation	Default (by Sheets)
136151 Dimensions	
Differences b Traction Hydraulio	petween title blocks for: elevator – *_rop_* c elevator – *_hyd_*



Saving sheet templates A3.3 SHEETS & SHEET TEMPLATES

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Saving sheet templates (*.lds)

- into the data pool directory under *sheets*. Thereby the sheet template can be selected at the end of the ShaftWizard.
- Sheet templates are saved with all the individual settings and can be used for any further projects.



New Sheet ×

Creating a new sheet A3.3 SHEETS & SHEET TEMPLATES

Clone the new sheet

- A new sheet can be cloned
 - within one project









New Sheet ×

Creating a new sheet A3.3 SHEETS & SHEET TEMPLATES

Copy the new sheet

- A new sheet can be copied
 - into other projects



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A3.4

Annotations





PLW 1250 BG 1300

CW 120 1200 DW 1000

General Information

Can be created on a view frame or on a component basis

- Existing annotations can be edited by simply double clicking on it
- Component & view frame annotations can be added and edited
 - via the DigiPara[®] Liftdesigner text Editor dialog



Cancel

Help

OK

Active View Frame Annotation

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A3.4 ANNOTATIONS

View Frame related Annotations

- Selecting a view frame first
- Adding an annotation via the text editor dialog
- The annotation gets displayed in the view frame



Active Component Annotation

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A3.4 ANNOTATIONS



Extended Annotation Settings

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Different text sizes in annotations

Via {\H.sizeFactorx;text}

Data tree -i32 DEVELOPER_OUTLINE = 0 -str DEVELOPERNAME = -str FILENAME = Text Editor - [Sheets.LdvSheet1.LdvFrame2.Map.NOTE#DESC] \boxtimes 🗓 🛛 By Layer 👻 LD \boxtimes By Style (Arial Unico 👻 5 - B I Headroom 🐺 Top Center :3-By Layer 🔻 🖌 DT 👯 Margins 2 -▼ By Layer ▼ Background Mask None Detail c-c {\H.8x;Headroom} {\H.7x;Detail c-c} {\H.6x;External\$("MSGGRP1103.MSG12"): External\$("Me.SCALETEXT")} Scale: 1:20 \boxtimes \boxtimes {\H.8x;Headroom} ALL 7 D . . . ОΚ Cancel Help

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A3.5

Data Tree & Project References

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A3.5 DATA TREE & PROJECT REFERENCES

Project-specific values and objects are created via the DigiPara[®] Liftdesigner data tree

The Data tree represents the project as a text structure



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A3.5 DATA TREE & PROJECT REFERENCES

There is one node for

- Every component / object
- Every dimension

List objects have an individual node each, like

- Entrances and landing doors
- Rail brackets
- Etc.



A3.5 DATA TREE & PROJECT REFERENCES

Major objects

List objects always start with the index 0



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A3.5 DATA TREE & PROJECT REFERENCES

Project Specifications

- Project References are build on the names of the selected object and its parents
 - Reference for the car frame object: "Shaft0.Car.Frame."
- Object related references are typically ending on a dot



Elevator Project Values A3.5 DATA TREE & PROJECT REFERENCES

Typically referenced project values are located under the following nodes





The **L_StandardTab.** node:



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Elevator Project Values A3.5 DATA TREE & PROJECT REFERENCES

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Typically referenced project values are located under the following nodes

The **Shaft**. node :



The **FLL**. node :



Elevator Project Values A3.5 DATA TREE & PROJECT REFERENCES

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The Project specification values located under the L_Projects. node (basically used in title blocks) can be edited via the Main Project Data ... dialog



Copying External\$'s from the Data Tree

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A3.5 DATA TREE & PROJECT REFERENCES

References can be created for copying via the right mouse button context menu



Copying External\$'s from the Data Tree

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A3.5 DATA TREE & PROJECT REFERENCES



Copying External\$'s from the Data Tree

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A3.5 DATA TREE & PROJECT REFERENCES



A3.6

Practical use cases for External\$'s



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Syntax & External\$ Expressions

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- The currently selected component is active
- Data tree path to the selected component





Syntax & External Syntax Syntax & External

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A3.6 EXTERNALS'S

Example on the list object: "COUNT"

- "Me.Parent." is the path from the active component to the value that belongs to the parent component.
- Data tree path to the selected component



📑 DigiPara Liftdesigner 🚽 - Project tree

X

Examples Special Values/Operations

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Calculations with External\$'s

Special Values/Operations

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Simple Calculations using data tree references

Car area: \;#[.2] External\$("Shaft0.Car.CW") * External\$("Shaft0.Car.CD") / 1000000\; sqm



- Calculations generally start with a # (number sign) symbol.
- Calculations can be combined with leading or trailing text.
- Therefore the corresponding parts of the annotation must be separated by a backslash-semicolon character sequence (\;).

Examples Special Values/Operations

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Simple Calculations using data tree references

- F3: \;# External\$("Me.Force0.FZ")/1000\; kN
- Forces can be entered via the main project data.



Examples Special Values/Operations

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Simple Calculations using data tree references

F3: \;# External\$("Me.Force0.FZ")/1000\; kN



A3.7

External Blocks (AutoCAD DWG's)



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Referencing External\$ in DWG's

A3.7 EXTERNAL BLOCKS (AUTOCAD DWG'S)

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д X

Can be displayed as static content in DigiPara[®] Liftdesigner drawings (.dwg, .dxf)

- Can contain DigiPara[®] Liftdesigner project references
- Can be used in DWG annotations and standard view frames



Data tree

🔒 DigiPara Liftdesigner Project file

🗄 📲 🚦 Beams -1 [BeamList.]

DWG annotations related to active components are created via the corresponding annotation property Arrow Position Y [mm] 109.0428159195386

Loading external Blocks

A3.7 EXTERNAL BLOCKS (AUTOCAD DWG'S)



Loading external Blocks A3.7 EXTERNAL BLOCKS (AUTOCAD DWG'S)

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Independent DWG annotations

Replace an existing view frame



Go to External A3.7 EXTERNAL BLOCKS (AUTOCAD DWG'S)

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Finding the path of a value in the data tree without opening the AutoCAD file

To find a value in dwg tables, mouse over the value and right click





Go to External A3.7 EXTERNAL BLOCKS (AUTOCAD DWG'S)

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Finding the path of a value in the data tree without opening the AutoCAD file



A3.8

Title Blocks & Drawing Border



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Meaning of titl_prefix A3.8 TITLE BLOCKS & DRAWING BORDER

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Title Blocks: Filename starts with titl_

view of standard Liftdesigner DWG files in AutoCAD

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The object in the lower left corner specifies the title block's insertion point.

• It automatically gets aligned with the lower left corner of the drawing border in DigiPara[®] Liftdesigner.



Title Blocks & Drawing Border

igipara[®] liftdesigner

A3.8 TITLE BLOCKS & DRAWING BORDER

Drawing borders: Filename starts with **bord_**

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Standard DWG Directory A3.8 TITLE BLOCKS & DRAWING BORDER

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The standard directory for external blocks is in the DigiPara® Liftdesigner data pool

- The DWG, DXF files are saved in the blocks directory
 - e.g. C:\DigiPara\Datapool\blocks

A3.9

After Training Practice



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Create a new sheet Add a Machine Room View

A3.9 AFTER TRAINING PRACTICE

- Add a Plan View
- Add a drawing border: bord_2h.dwg
- Add a title block: titl_rop_int.dwg

View Frames & Sheets

- Position the views inside the drawing border
- Rename the sheet to: My Views
- Save the sheet template





Machine room

0 - EN 81

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Create a new drawing sheet under related to the following requirements:



Add a rail bracket detail section to the My Views sheet:

- Copy the existing plan view
- Create the simply detail section
- Change the view description
- Save the sheet template again



Rail Bracket Detail Scale: 1:20

Add a component annotation to the front and rear shaft door of the plan view:

- Text height 3.5
- Save the sheet template again





Create a new Plan view and add a view frame annotation containing the following references:

- Shaft depth
- Shaft width
- Floor count

Create a shaft lamp component annotation containing the following references:

- Lamp count
- Lamp type
- Save the sheet template again

Special View Types A3.9 AFTER TRAINING PRACTICE

Add a plan view detail section rule based (X and Y direction) to the My Views sheet

- Copy the existing plan view
- Create the detail section rule based
 - X-min direction: (-) left wall
 - X-max direction: shaft width + right wall
- Create the detail section rule based
 - Y-min direction: (-) front wall-20
 - Y-max direction: ½ shaft depth + front wall
- Check by changing the CW&CD dimension
- Saving the sheet template and the entire project again





A3.10

Summary & custom Q&A's



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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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