

# News







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# Introduction

After many years, in 2024 we have finally succeeded in delivering the new version earlier in the year as well as moving the user meeting forward. The aim is to move that even closer to start of the year and into the first quarter. Release date depends on region. In previous years, this was not possible for various reasons. One reason for this is the fact that the cadwork group and the number of customers has grown considerably. Added to this is the need to have the product available in more and more languages. In recent years, the complete delivery of a new version in all countries could therefore only be completed in the fourth quarter of a year.

Each country-specific delivery brings new customer feedback and entails additions to the development process, meaning that the entire development capacity cannot be available for the subsequent version from the start of delivery. The realization of all planned functionalities of the new version thus postponed the start of delivery to at least the second quarter.

Since the delivery of version 30, only a short period of time has been available for further development, testing and documentation. We have therefore decided to provide a service pack for version 30 in 2024 rather than a master release.

The functional scope of the service pack is less than in a master release. Nevertheless, there are a number of interesting new features, optimizations of existing functionalities and initial results on one of our core topics, the improvement of performance.



The version available from February 2024 is called *cadwork version 30 (SP2024)*. It is based on the version 30 database and is therefore backwards compatible with it and offers a high degree of stability thanks to the corrections and additions made in recent months. *cadwork version 30 (SP2024)* is not installed via a setup as usual but is installed automatically for every maintenance customer via the Live Update. There is also no need for you to adapt init and/or layout files.

This year's early delivery of the new version is also linked to objectives that will have a positive impact on the performance of our software in the medium and long term. As the chosen approach does not tie up the entire development capacity, we have already been able to work on the cadwork version for 2025 since summer 2023. The development cycle for this version will therefore be extended, giving us the opportunity to further modernize the core and work on medium and long-term projects. For example, the connection to our HOOPS graphics engine will be re-implemented and we will focus intensively on the important challenges of performance and stability. This version will be called *cadwork version 2025* and will be released at the beginning of 2025.

Due to the approach described for this year, the focus of the user meetings will also be slightly different. Of course, there will be enough space for a detailed explanation of the new features in *cadwork version 30 (SP2024)*. In addition, we will focus on functionalities that are not new, but are only known to a few customers or are not used to their full extent. And last but not least, we want to allow sufficient time to maintain the important personal exchange with our customers.

We would like to take this opportunity to thank all our maintenance customers. The regular mutual exchange provides us with an important basis for practical further development. Your maintenance contributions ensure that we can continue to develop our products and provide you with a competent and committed support and training team in your day-to-day business.

We would be delighted if you would continue to place your trust in us and hope that we will meet your requirements in terms of performance, quality and technical support at all times.

We wish you a successful start to working with the new version. The following documentation should help you. In addition, a <u>collection of videos</u> on various topics will soon be available in *cadwork version 30 (SP2024),* which will be continuously expanded. Of course, we will also be happy to answer your questions personally.

Your Caldwork team.

Cadwork"



#### \* 3D

- General information
- Update Graphic engine "Hoops Visualize"

We use the "Hoops Visualize" library from Techsoft to display the design in cadwork 3D. The library enables us to display the design in 3D in an appealing and high-performance way. Unfortunately, there were some performance problems in cadwork version 30, which we were able to resolve together with Techsoft last year. The performance in hidden line mode with dashed lines was so inadequate that the 3D file sometimes froze. With Service Pack 2024, you will receive an update that fixes these problems.

- Update of the import library "Hoops Exchange"
  - Importing IFC files

Techsoft supports us in importing IFC files with a library called "Hoops Exchange". We are now using the latest version of this library in Service Pack 2024, which can import large IFC files more quickly. The time gains are particularly large if many intersections have to be carried out due to the geometry description in the IFC file. As an example, we would like to mention IFC files that were output by "Tekla". Furthermore, in the latest "Hoops Exchange" library, the reliability and tolerance of faulty and "unclean" IFC files has been improved. Customers who frequently receive IFC files from various third-party programs know that the quality of the data is often not sufficient to read them into cadwork 3D. "Hoops Exchange" is looking for ways to read the "unclean" IFC files anyway, so that they can at least be used as a visualization in cadwork 3D.

• Importing SketchUp files

With the update of "Hoops Exchange", the import of SketchUp files in 2023 format is supported. In the last version, you could only import files up to the 2021 format.



Calculation time of the wall shop drawing export

For Service Pack 2024, we have focused a great deal of attention on the performance of the wall shop drawing export. Especially exports from projects with a high level of detail and many drillings, connector axes and/or MEP axes repeatedly lead to long export times.

For this reason, we have examined these exports in detail and implemented various conversion measures and optimizations that lead to a significant acceleration of export times. The more complex the project, the greater the time saving. Nevertheless, the speed advantage also has a positive effect on smaller projects.

For future versions, we will continue along this path and focus a large part of our attention on optimizing and accelerating exports in order to further reduce export times significantly.

Revision of the connector axis drilling visualization

For Service Pack 2024, the visualization of the drillings of connector axes (CA) has been revised. This revision means that the holes of the CA are now rendered much faster. Especially for drillings that are cut off at an angle, only around a third of the time should be required for rendering. This means that files with many diagonally cut CA drillings in particular should now start up much faster.



### • Starting up version 15

Up to and including cadwork version 15, a binary file format was used for sequential reading and writing of all data. Since version 16, an SQL database has been used to store the design data. This is a modern form of data storage that enables flexible expansion, offers greater data security and ensures permanent access to all data during program runtime.

Due to this change, 3D files from version 15 or older had to be converted for loss-free data transfer. For this purpose, a converter was installed upstream when importing such a file. The continuous further development of the database also requires further development of the converter.



Cadwork

As the import of 3D files from version 15 or older is required less and less frequently, the adaptation of the converter has been discontinued from version 30 (SP2024). Therefore, only files from version 16 can be imported from now on. When attempting to import older files with cadwork 3D (SP2024), a corresponding message will appear. Older files must first be started and saved with an older version (e.g. cadwork 3D version 29).





- > Windows/Top menubar
- File -> Settings...

With the Service Pack 2024, the new *Overwrite all* settings import option is available in the *Import settings* dialog.

Import settings		
Search in ● Current folder ○ Userprofile		
Settings import options Merge Overwrite unused Overwrite all	Currently, only the material data is available for the "Overwrite all" settings import function.	
Settings		
Project data	Attributes	
🗹 Material data	Names	
End-types/Beam end prof.	Groups	
Markings settings	Sub groups	
List layouts	Comments	
Graphics option	SKUs	
Element module	WUP Codes	
Log house	User2	
Machine config.	User3	
Scenes	User4	
	User5	
	User6	
	User7	
	User8	
	User9	
	User10	
	User11 - UserX	
+ All - All		

The *Overwrite unused* settings import option, which was already available in previous versions, first deletes the existing settings from the 3D file and then imports all settings from the selected file.

Settings that are already in use are neither deleted nor changed with this option. The new settings import option *Overwrite all* also deletes the existing settings from the 3D file and then imports the settings from the other file.

The settings that are in use are also overwritten with this option. This means that it is subsequently possible to completely adopt the settings from another file and apply them to the entire project.

This option is currently only available for material data. It is planned to extend this to the other settings in the next versions.



File -> Import...

News on importing files is documented in the Right menu section under *Add -> Files...*. News on importing IFC files can be found in the IFC section.

News on importing Point clouds can be found in the Point cloud section.

File -> Export...

The latest news on exporting files is documented in the Right menu section under Export -> Files....

News on exporting IFC files can be found in the IFC section.

- Edit -> Activate all <Ctrl+A>
  - Info window

This function can be used to activate all elements or elements with special properties very quickly. As with every activation process, the info area in the bottom right-hand corner is then updated with the information on the active components. If not all item properties have been calculated in advance, there may be a noticeable delay before further processing is possible, if there are a large number of active items. This time span has been shortened in the service pack, making it possible to work more smoothly.

It was also possible to achieve a speed advantage in large files if there are many items with the same item or production number. The calculation time for the number of active items with same item or production number has been significantly reduced.

Info	
Element	Group
Name	000
Group	000
Sub grp.	
Building	000
Storey	000
No. production li	000
No. item list	000
No. assembly list	000
Wall situation	
Color	000
Active elements	
Nodes	0
Axes	18
Lines	4
Surfaces	2
Volumes	29
volume	15.076 m*
weight	23223.0 kg
Beam run length	+2.1776 m
Panel run length	11.7444 m
Running length pa	3.6560 m
Panel surface	40.6 m <sup>2</sup>



 Shortcut key <Ctrl+E> - "All element module output settings (Ctrl + E dialog)" In Service Pack 2024, the output settings available in the Element module dialog (Ctrl+E dialog) are grouped together. The entire group can be activated with the new option All element module output settings (Ctrl+E dialog).

"Activate attribute by active parts" shortcuts		×
"Activate attribute by	y active parts" shortcuts	<b>()</b>
A       Group         B       Comment         C       Color same element type         D       Thickness/height         E       End-type         F       Color all elements         G       Parts assigned to Export solid/Container         H       Element module rough volume (wall, roof, floor and opening)         I       Nested part         J       CA interface         K       Parts in contact         L       Length	Shift+B       Container blocks with same reference         Shift+C       Cutting set from cut tolerance         Shift+E       Came element module properties         Shift+E       Same element module properties (variable thickness)         Shift+E       Same element module properties (variable thickness)         Shift+G       Export solid/container of active parts         Shift+I       Coupled elements         Shift+J       CA with same parts configuration         Shift+H       List length         Shift+W       List width         Shift+X       List x-section	^
M       Material         N       Name         O       Assembly number         P       Production number         Q       Machine data         R       Position number reference model         S       Item number         T       Element type (beam, panel, surface)	Shift+Y       Wall allocation         Shift+Z       Process quality         Ctrl+E       All element module output settings (Ctrl+E dialog)         +       Layer allocation         (       Same setting as "with dimension"         )       Same setting for "Show attributes"	
U	#  Texture Quantity in part list Rough weight Real weight Real weight, Deduct drillings, openings and end-type counterparts	
BVN process aroup	1 🔲 WUP Codes	Activate Close

In addition, the previously missing output setting "Show attributes" can be taken into account with the option *Same settings for "Show attributes"*.

This makes it possible to activate elements with identical output settings for the wall shop drawing export.



Window -> Display filter

The + and - buttons are available for the element type filter to quickly select or deselect all element types. The position of these is now fixed so that both buttons are displayed even in small window sizes with an active scroll area. 

Sets	5	Î	Name {empty}(13)	Element type filt
CA Cross section Beam Container blocks			( tempty (13)	Nodes     Axes     Axes     Normal     Rectangular     Circular     Eave     Connector axis     Standard CA     Circular MEP     Surfaces     Roof surfaces     Normal     Spline     Normal     Spline     Rectangular     Circular     Stel shape     Auxiliary elements     Goldal cut     Container     Container     Container     Container     Container     Section trace
Add set	Delete			+ -
beal	Caus			

Tools -> Configuration "Ctrl+J"
 The clipping box is now available as a new special element for fading in or out using the <Ctrl+J> key combination. The clipping box makes it easier to work with point clouds.

	Configuration "Ctrl+I"	
	configuration ctrify	
Construction elements	Architecture elements	
Rectangular	🗹 Wall	
Circular	Roof	
Steel shape	Floor	
Panel	Opening	
Surface	Standard part	
Roof surface	Room	
Auxiliary element	Special elements	
Node	Annotation	
Node	Show object	
	Lite element	
Connector node	Point cloud	
	Clipping Box	
Axis	Variant	
Normal axis	Dimension	
Rectangular axis		
Circular axis	Shop drawing	
Eave axis	Export solid	
Drilling axis	Container	
Connector axis	Container block	
Line Line	Section trace	
Spline line	Global cut element	
Circular MEP		
Rectangular MEP		
+/- all element types	ОК	Cancel



Tools -> Hoisting



A *Light wall* and a *Heavy wall* option are available. The *Light wall* option places the lifting points in the top plate as example for mechanical lifting anchors whereas the *Heavy wall* option additionally uses the studs to spread the lifting load onto the panels. An example here would be lifting slings.



# • General

All settings that can be defined independently of the wall type are defined in this tab:

• Wall differentiation by

As usual in cadwork, the walls, roof or floor panels are defined as a group or a subgroup with a wall rough volume. The rough volume axis alignment plays a decisive role in referencing, which is required to calculate the lifting point positions. The lifting points you define are distributed according to the materials centre of gravity.

- Attributes of created components
  - Color.

Color that the created lifting point components (Drilling axes, connecter axes, markings,...) are getting assigned.

Name:

Name that is assigned to the generated lifting point components.

Name of top reference parts

When calculating the lifting points, it is essential that reference parts are defined. Those top reference parts are used for lifting point placement. These parts serve as the basis for the positioning of machining operations for lifting points such as drilling axes, connector axes and end-types. Defining the reference parts ensures that the machining operations are carried out in the correct places.

• Weight limit

Limit value for determining whether a wall is considered as "Light wall" or "Heavy wall". This differentiation is mainly used to assign the two option of lifting point configuration - top plate fixing only or use of stud to spread the load.

Wall differentia	ation by
Group	
O Subgroup	
Attributes of creat	ted components
10	
Name	
Lifting points	~
Names of top ref.	parts
Names of top ref. > Add names	parts 🕀
Names of top ref. <ul> <li>Add names</li> <li>Cornerpost</li> </ul>	erts
Names of top ref. <ul> <li>Add names</li> <li>Cornerpost</li> <li>Top Plate</li> </ul>	parts ①

Weight limi	t	
	400.0	kg
Light wall		Heavy wall



#### • Hoisting calculation

This dialog component is displayed on all three tabs (*General, Light wall* and *Heavy wall*) in the "Hoisting" dialog so that the calculation can be started at any time.

	_				
Hoisting calculation	Calculate:	Light	Heavy	All	Report:
					·

Use the *Light*, *Heavy* and *All* buttons to start the respective calculation for all active walls.

• Light wall

All walls below the entered weight limit are classified as "Light wall" and their lifting point calculation is carried out using the configuration in this tab.

👫 Hoisting	X
Framed wall	Light wall
General	
Light wall	
Heavy wall	Lifting points
	500 mm 400 mm
	Processes in top reference part Distribution direction of lifting points
	horizontal
	Drilling Diameter: 40 mm
	○ Standard connector M16-2CB ✓
	C Lengthening (End-type) End-type: L+10
	Hoisting calculation Calculate: Light Heavy All > Report:
Load Save	Keep window open OK Cancel Apply



Lifting points



You can use the + and - buttons to add or remove additional lifting points.



You must specify an offset for each additional lifting point. The offset is always calculated from the centre of gravity in the positive and negative axis direction.

• Processes in top reference part

If the *Make position correction* checkbox is selected, an attempt is made to position the lifting point without colliding with the studs. Otherwise, the exact offset specified is used for positioning. A position correction is only made in the direction of the longitudinal axis of the wall.

The element capable of creating a process is generated during the calculation according to the active selection. Drilling axes with the defined diameter, connector axes previously added to standard element library as standard connector axis or end-types of the type "Lengthening" are available for selection.

Processes in top reference	e part			
Make position correction		<b>⊲3</b> ⊳		
	Diameter:		40 mr	n
Standard connector		M12-TR	~	
O Lengthening (End-type)	End-type:	L+10	$\sim$	

Lifting point positions can be generated either horizontally or vertically for the type "Light wall". The prerequisite is that top reference parts can be determined in these directions. Vertical lifting point positioning is not possible for the type "Heavy wall".



• Heavy wall

👫 Hoisting		×
Framed wall		Heavy wall
General		
Light wall		
		Lifting points
		•••
	<b>3 3</b> 3	5 5 5 5 5
	2000 mm 100	00 mm
	2000 1111	
	Processes in top reference part	Process in stud
	Position correction is always performed 🛛 🞝	○ End-type T 0-0/40 ∨
	Drilling Diameter: 80 mm	Drilling Diameter: 80 mm
	○ Standard connector M16-2CB ∨	
	Number of drillings	
		Offset 400 mm
	Hoisting calculation	Calculate: Light Heavy All Report:
Load Save		Keep window open OK Cancel Apply

For walls that are heavier than the weight limit entered, the calculation is carried out using the configuration in the *Heavy wall* tab. Lifting point positions can also be added here and their offsets defined. In contrast to light walls, the position correction is always carried out. Standard connector axes or drilling axes can be calculated in the selected top reference part.

Number of drillings

*It* is specified whether one or two drillings are to be drilled to accommodate the lifting device. For a single hole, this is positioned on the pull side of the handle. If two holes are drilled, these are positioned to the left and right of the identified stud.

In addition, holes or mortises are created in the vertical stud by the selected endtype, through which a sling can then be pulled.

Number of drillings	
I drilling	
O 2 drillings	
Number of drillings	A1 1/1
0 1 drilling	
2 drillings	
Offset	400 mm



Hoisting calculation

The *Light, Heavy* or *All* buttons are used to calculate the lifting points for the active walls, taking their weight classification into account.

Hoisting calculation Calculate: Light Heavy All Report:						
	Hoisting calculation	Calculate:	Light	Heavy	All	Report:
						· · · · · · · · · · · · · · · · · · ·

After the calculation, a calculation report is displayed.

The components created by the hoisting function were added to the walls with the properties set under *General -> Attributes of created components*.

Calculation results	×
Calculatio	on results
š≣ Expand all	}≡ Collapse all
<ul> <li>Walls with errors</li> <li>IW - Light wall No rough volume found</li> <li>Walls calculated succesfully EW - Heavy wall</li> </ul>	
	Keep window open OK



- Lifting point examples, possible calculation results
  - Light wall with 15 mm lengthening (End-type), horizontal distribution of lifting points, processes in top reference part with name "Top plate".



 Heavy wall with two drilling axes through the top reference part named "Top plate". The sling hole through the stud is generated with use of an endtype.





# Script-populated attributes

The script-populated attributes introduced in version 29 are becoming increasingly popular.

Especially when developing a script-populated attribute, it is often necessary to adapt and correct the script used. To do this, it is necessary to open the *Attribute manager* dialog under *Userprofile (user's settings) -> Timber... -> Attributes*, switch to the *Auto populate* tab and update the corresponding script using the 🖸 button.

To simplify this process, the *Script-populated attributes* dialog has been revised and the *Script populated attributes configuration* section has been added. This makes it possible to switch directly to the *Auto populate -> Configuration* tab in the *Attribute manager* dialog and update the corresponding script or create new scripts.

Auto-attributes		×
Execution mode	and configuration	
Execution		
<ul> <li>Automatic execution</li> </ul>		
O Manual execution	Scripts can contain viru	uses!
No execution		- I
Script populated attributes confi	iguration	-1
Open script populated attributes cor	nfiguration	- I





- Status bar
- Attributes display

The following new attributes are now available for the attribute display:

- Panel thickness real
- Panel thickness rough
- Panel format (LxWxT) real
- Panel format (LxWxT) rough

Export types		3D s	ettings	
	Attribute selection			
2D clipboard <,>	Available attributes	nanel Filter	Selected attributes	
2D without layout <>	Papel area real	perior	1: Name	
2D with Layout <;>	Panel area real		2: Rand format (Ly/WyT) roal	
Export solid	Panel format (LyNA) Dool		2: Panel format (LXWXT) read	
Container	Panel format (LXW) Real		3: Panel format (LXWXT) rough	
Machine	Panel format (LXW) Rough		4: Material	
Log wall	Panel format (WXL) Real		5: Panel thickness real	
Framed wall	Panel format (WxL) Rough		6: Panel thickness rough	e M X
Solid wood wall				
Vesting module				
Nesting shop drawings	Text position T	ext orientation and separation		
Options	O mm 0.00	Horizontal		
	%     50	Along length axis		
		Separation	/	
		X-section	x	
	Brouiour	Bidge / 2500v1250v25	0 / 2500×1250×250 / Dipp / 250 / 250	
		Nuge / 2500x1250x25	5 / 2300X1230X230 / Fine / 230 / 230	
Show sets	Apply global settings to all parts			OK Cancel Apply
Fundermax (	Exterior 3200,0x1900,0x8,0		Fundermax, Extenor 8,0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax, Extenor 8,0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax, Exterior 8,0	
Fundermax (	Exterior 3200,0x1900,0x8,0		Fundermax, Exterior 8,0	
Fundermex (	Exterior 3200,0x1900,0x8,0		Fundermax Exterior 8.0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax E	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermex (	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax I	Exterior 3200 0x1900 0x8,0		Fundermax Extenor 8.0	
Fundermax (	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax I	Exterior 3200,0x1900,0x8,0		Fundermax Extenor 8.0	
Fundermax I	Exterior 3200 0x1900 0x8 0		Fundermax Extenor 8.0	



- ≻ Left menu
- Configuration of the *Graphics options* 
  - Expert mode -> 3D mouse The integration of SpaceMouse devices from 3Dconnexion has been improved with Service Pack 2024.

These improvements are currently being reviewed by the manufacturer 3Dconnexion. After successful testing and review, cadwork 3D is a certified software for 3Dconnexion 3D mouse. The certification will be completed in the next few weeks.



In order to use a SpaceMouse in cadwork, it must be activated once in the *Expert mode* tab of the *3D* - *Graphics options* dialog:

	5	Graphics options	X
ų,		General	3D Mouse
		D Wireframe	3D Mouse
$\bigcirc$		D Hidden lines	Use 3D Mouse
$\widehat{\mathbb{Q}}$	¢	Dashed hidden lines	
∢⊗	₽▶	Shaded 1	
۰	Q	Shaded 2	
(	2	Expert mode	
(	Q	Performance	
Vi	ion	3D Mouse	
	1%	Others	
Mea	isure		
		☑ Expert mode	Set defaults Ok Cancel Apply
_	_		



All other settings for the 3D mouse are made in the 3DxWare driver of the mouse. This requires the mouse to be connected and the latest 3DxWare software from 3Dconnexion to be installed.

The following changes have been integrated in this area:

New representation of the rotation point

We now use the symbol provided by 3Dconnexion for the rotation point instead of a generic point marker.

The new rotation point icon is a small representation of the 3Dconnexion logo.

During rotation, the settings set in the 3D connexion driver are used:

Navigation	Navigation Modes Rotation Center Other Speed
Pan / Zoom	✓ Auto
<ul> <li>Rotation</li> </ul>	✓ Use Selected Item
Dominant	Always Show
	Show on Motion
Zoom Direction	Hide
<ul> <li>Forward / Backward</li> </ul>	
Up / Down	
Device Settings	
✓ LEDs Active	
Calibrate	

#### Use selected item

If this option is active, the rotation point is placed on the active point. If no point is active, the rotation point is placed in the middle of all active elements. If no elements are active or the option is not activated, the following applies: If all visible elements are in the image section, the rotation point is placed in the middle of the visible elements, otherwise the rotation point is placed on the first element in the middle of the image section.



Navigation functions

All navigation functions of the SpaceMouse are now supported.

QuickZoom (zooms in/out to crosshair position), Fit (zooms to all visible elements), ISO views and saving and loading views in 3DxWare and many other functions are now also supported by cadwork 3D.

aceM	louse Enterprise					010200
1	🚺 Virtual NumPad	> ESC	ESC Esc Key	>	V1	3Dconnexion V1 Restore
2	🕞 File Explorer	> TAB	→ł Tab Key	>	V1	3Dconnexion V1 Save
з	() Internet	SHIFT	☆ Shift Key	$\rightarrow$	V2	3D connexion V2 Restore
4	🕒 QuickZoom In	CTRL	RL Ctrl Key	>	V2 <mark>0</mark>	2 3D connexion V2 Save
5	[] QuickZoom Out	> ALT	alt Alt Key	>	VЗ	3D connexion V3 Restore
6	D Paste	SPACE	- Space Key	>	V3 <mark>0</mark>	3Dconnexion V3 Save
7	💻 Align Window Left	> ENTER	← Enter Key	>	رت	C Roll View +90
8	💻 Align Window Right	DELETE	🔟 Delete Key	$\rightarrow$		Roll View -90
9	Cycle Apps	MENU	Properties	$\rightarrow$	T	Top View
10	り Undo	>			T	D Bottom View
11		>			F	Front View
12	<ç̂→ Move Object	>			Fek	🗐 Back View
Dis	able On-Screen Display				R	Right View
					RL	🗐 Left View
					LOCK	Rotation On/Off
					ISO 1	1 ISO1 View
					1902	(2) ISO2 View
					CIT.	(d) =

Compatibility

The integration is only compatible with SpaceMouse devices from 3Dconnexion. Devices from other manufacturers are not supported.

The 3D mouse is an additional operating option for cadwork 3D, but it never completely replaces a normal mouse and keyboard.



Userprofile (user's settings)-> Timber... -> End-types... -> Dovetail
 In some configurations the dovetail mortise must be enlarged so that a dovetail can be
 inserted into its counterpart. The dimensions required for this are usually only known
 on the machine. For this reason, the BTL, bvx and bvn machine interfaces provide the
 options "With pocket" and "Extended" for inserting the dovetail.

These options can be found in cadwork in the end-type definitions under *Modify -> Dovetail mortise -> Dovetail mortise execution*.

With the execution "*Extended*", the dovetail mortise is extended along the taper angle up to the top edge of the receiving part. Under certain circumstances this can lead to very long processing e.g. lintel to mullion connection.

With the execution "*With pocket*", a rectangular pocket is milled out above the dovetail mortise just high enough for the dovetail to be inserted and slid into place. How high and wide this pocket is ultimately produced is decided by the respective CAM system. The dimensions of this installation pocket on top of the dovetail mortise can therefore not be displayed realistically in the viewer mode, in the shop drawing export and in the individual control under machine export.

In cadwork, the height of the pocket corresponds to half its width.

Subie Settings	Dovetail mortise	
Mortise Housing Offset Double dovetails	Dovetail mortise tolerance         Space between dovetail end and mm         space between dovetail bottom edge and mortise	
	Dovetail mortise execution on top edge/exit	
	X X/2	



Userprofile (user's settings)-> Timber... -> End types... -> Tenons

For better usability, a new note has been added for the tenon in the end-type dialog. This message appears as soon as you have set that drilling axes are to be created that are not linked to the end-type. This is intended to reduce the risk of this option being set unintentionally. The advantage of non-coupled drilling axes is that they can also be modified in 3D afterwards, as they behave identically to drilling axes that have been created manually.

The major disadvantage, however, is that the drilling axes do not react to any changes to the tenon. If the part with the tenon is moved, copied or deleted, for example, the drilling axes remain unaffected. If you are not aware of this, drilling axes can quickly remain in the wrong positions in the project and/or be missing in other places. If this only becomes apparent later, it is very difficult to clean up the project. To avoid this problem, it is recommended to work with linked drilling axes for the tenon. However, if you are aware of how the non-linked drilling axes behave, there is of course no reason not to use them.

Endtype definitions	
Basic settings	Drillings/pegs
/lortise	Drillings/pegs
ackcut	O No drillings
aunahad tanan	Single row drillings     Distance to end face (Y)     0 mm
autoneu tenon	○ Grid drilings
ousing	Quantity of drillings
ffset	One drilling
ouble tenon	Centered
	O Third if angle is over: (centered if not) 0 deg
illings/pegs	O Defined location X 0 mm
non execution	O Two + drillings Ouantity of drillings
	O Defined location X1 0 mm X2 0 mm
	Drilling set based on
	O End face
	Drillings execution
	O Only drillings Draw bore 0 mm Diameter 0 mm
	Drilling as drilling axis     Diameter     O     mm     mm
	Link axis to end-type
	O Drilling as std connector axis If you use the option Drilling as drilling axis without using the Link axis to
	end-type option, drilling axes are created that are independent of the end-type. These drilling axes can be subsequently modified in 3D, but they no longer react
	to modifications in the end-type dialog.
	In order to avoid additional drillings being created with every change in the end-
	type dialog, those drilling axes are only created when attaching the end-type to a component initially, but not if you modify the end-type affenyards. If you still
	want to create the drilling axes again, you must first remove the end-type from
	the component and then attach it again.
	If you want to create drillings that always react directly to modifications in the
	end-type dialog, use the option <i>Link axis to end type</i> .



- Right menu
- Activate attribute -> Machine data The function Activate attribute-> Machine data activates all parts for which machine data has already been calculated. The settings button can be used to differentiate which processes the parts to be activated should contain. If parts are already active, calculated processes are switched on for these parts. parts are activated or deactivated by switching them on or off. In version 30 (SP2024) there is an additional setting Show reference side. If you activate this option, the machine processes calculated in the design are further subdivided into the determined machining reference sides. This information is helpful if accessibility is restricted during production, for example machining from below (Side 1) on a panel that cannot be turned. The colors and numbers (Side 1, Side 2, ...) of the displayed reference sides correspond to those in the individual control of the machine export. The designations (negative height, positive width, ...) refer to the local axis system of the parts.

-	o ×		
1		-	
Units mm deg			-
Elements by type	Ctrl+Alt+T	Units mm der	1
Elements by attri	bute Ctrl+1	Show referen	rce side
Elements by user	attributes Ctrl+2	+ All	- All
Nodes by attribut		A->Z	- ЛІІ
Surfaces by attrib	ute	Cut	
Standard element	ts	■ Face 2 (P) ▼ Tenon ▼ Face 2 (P) ▼ Face 3 (P) ■ Mortise ■ Face 2 (P)	ositive width) ositive height)
End-type		■ Face 4 (N	egative width)
Beam end profiles	5	Face 4 (N	egative width)
Cutting sets		Face 1 (N	egative height)
Marking elements		Face 1 (N	egative height)
Flement module		Face 1 (N	egative height)
Machine data		Start marking     Face 2 (P     Free contour	ositive width)
Attributes display		Face 2 (P	ositive width)
Imported files		Contour/Cut	ositivo hoight)
· ·	_		usicive neight)
Ream dimensions		-	ositive wath) ositive height)
Danal dimensions	Units mm dea		egative width)
Avia dimensiona	Show referen	ce side	ositive width) ositive height)
Axis ulmensions	+ All	- All	egative width)
	A->Z		ositive width)
Rough weight			
Real weight	Mortise Length cut		
Defective parts	Hip/valley cut Marking Inscription Start marking Free contour		
Return	Drilling		
	Lap Pocket		



Add -> Axes... -> Connector axes

The option introduced in version 28 to automatically determine the axis length in the 2D plane using the keyboard option  $\langle E \rangle$  Active elements is now active by default as soon as the function with active elements is called.

(L)1. Point (M)Cursor	(R)Return	I:Intersection	M:Mid-point	X:X auxiliary line	Y:Y auxiliary line	D:Distance	E:Active elements	V:Element in foreground
Add connector 1 point	and length							

The size of the connector axes dialog could previously only be adjusted at the bottom right-hand corner. Especially when working with multiple screens and different screen resolutions, it may not have been possible to reach this corner. The dialogs can now be resized across all edges and corners. This means that the size can be adjusted at any time, regardless of the current position of the dialog on the screen.





Б

Units mm deg

Wall catalog

Multilayer wall

Wall XML

Floor Roof ×

L+W 🛱

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In order to be able to recognize possible collisions with the bolt at an early stage, wooden plugs are made slightly transparent.



Add -> Architecture -> Wall

With cadwork version 30 (SP2024), this menu item is displayed in purple. This means that this menu item will be removed in future versions. In the future, the use of multilayer walls will be changed. It is already possible to convert 2dc walls into multilayer walls. The "Import" option is available for this purpose in the configuration dialog for multilayer walls.

					Door	r/Window	
Multilayer Wall					Roor	m	
Wall list			HRB-IW	-01-V100	Auto	o rooms	
✓ 3D File         Cadwork         Clients         Element module         HRB-AW-01-V140         HRB-AW-02-V140         HRB-AW-01-V140         HRB-AW-01-V1	Geometry Attributes Wall name Wall setup  Multilayer wall	IFC HRB-IW-01-V100		Layer setup Layer name   RV material   Layer Reference face	r thickness Retu	Im	
HRB-IW-01-V100 HRB-IW-02-V100	O Simple Wall			II         Bracing         OSB ▼         _           II         Framing         LVL ▼         _	15 × 100 ×		
UserProfil     cadwork	RV name	HRB-IW-01-V		II Bracing OSB ▼ -	15 *		
Clients     Element module     Testwalls Support	RV color RV material	90 Auxiliary element ~	····	II Wall telefence axis			
	RV thickness RV height	130 2500	mm				
	Wall type  Framed wall RV						
	Solid wall RV     Log wall RV			Add layer N	Airror layers		
	Wall reference axis O Value RV center	130	mm				
New Wall New Folder Copy Delete	<ul> <li>Layer list</li> <li>z-Value</li> </ul>	0	mm				
Import Export				Ok Can	cel Apply		



#### Add -> Architecture -> Multilayer wall

Refinements have been made to the "Multilayer walls" introduced in version 30. This affects the display of multilayer walls in cadwork 3D as well as working with the dialog for defining multilayer walls.

Previously, the wall layers in the wall rough volume were displayed as planes.

From Service Pack 2024, each layer is displayed as a volume. The transparency defined for the wall rough volume also affects the display of the wall layers. If wall layers are shown, they are displayed in the set transparency and the wall rough volume is displayed completely transparent. If wall layers are hidden, the wall rough

volume is displayed with the set transparency.



Version 30 without transparency





The changes in the dialog affect the behaviour of the left-hand area in which the list of existing multilayer walls is displayed. Two improvements have been made here.

When copying multilayer walls from *3D File* to *UserProfil* via "drag and drop", it was previously the case that the wall had to be dragged exactly to the *UserProfil* or to a folder in the *UserProfil* when moving it.

This has been adjusted for easier handling. The mouse button can now be released at any point in the *UserProfil* tree. The copy in the *UserProfil* is created exactly at this point in the *UserProfil*.

Wall list		H	B-IW-01-V100	/-01-V100		
3D File > cadwork > Clients ¥ Element module	Geometry Attribut	HRB-IW-01-V100	Layer setup Layer name RV material Layer thick	mess		
HRB-AW-01-V140 HRB-AW-02-V140	Multilayer wall		Reference face			
HRB-IW-01-V100 HRB-IW-02-V100	O Simple Wall		Bracing OSB ▼ 15	×		
> Testwalls Support	Rough volume da	ita				
UserProfil	RV name	HRB-IW-01-V	II Bracing OSB ▼ 15	×		
> Clients	RV color	90	Wall reference axis	_		
<ul> <li>Element module</li> <li>Testwalls Support</li> </ul>	RV material	Auxiliary element V				
Testwall 1	RV thickness	130 mm				
HRB-W-01-K-100	RV height	2500 mm				
HRB-W-02-1000	Wall type					
	Framed wall RV					
	Solid wall RV		Add laver Mirror	lavers		
	O Log wall RV					
	Wall reference axi	S				
	○ Value	130 mm		and the second second		
	O RV center		March 20 of the Supplementation			
New Wall New Folder	Layer list			* * *		
Copy Delete	z-Value	0mm				
Import Export						



Furthermore, it was previously the case that when a new folder was created, it was always created on the top level of the 3D file. Now, the active folder or active wall is always taken into account during creation and the new folder is created at the corresponding position.



- Add -> Files...
  - IFC (\*.ifc)...

News on importing IFC files can be found in the IFC chapter.

• *Revit (\*.rvt, \*.rfa)* 

Revit has again released a new version (Revit 2024) in 2023. We have expanded our interface so that we now support this version. This means that currently Revit versions 2014 to 2024 can be imported.



We import Revit files in \*.rvt and \*.rfa format with the help of an external tool. We will provide the next Revit version, which is expected to be released in 2024, as soon as the external tool supports it. Based on our experience in recent years, we expect this to happen at beginning of 4<sup>th</sup> quarter in 2024.

• Point cloud (\*.pts, ...)

News on importing Point clouds can be found in the Point cloud chapter.

Copy/Move -> Symmetry

For each rendered representation, the different textures must be used correctly parallel and transverse to the wood grain. In some situations, the more complicated geometry of beam end profiles led to the longitudinal texture being displayed on end grain surfaces when moving and copying symmetrically.



Render with V30 (SP2024)

With the help of the updated "Hoops Visualize" graphic engine, we were able to eliminate this problem in Service Pack 2024. The end grain texture is also displayed for each end grain surface.



Since the number of user attributes is no longer restricted, they are increasingly being used to structure the design.

This means that the number of user attributes used is generally much higher than 10, as was previously possible.

In Modify, up to version 30, a maximum of ten attributes were displayed in the list. To access the remaining attributes, the scrollbar that was then available had to be used.

With service pack 2024, the entire available space in the right-hand menu is used to display defined user attributes. The space for the display depends on the screen resolution used.

A scrollbar is only displayed if the number of user attributes used cannot be displayed in the available space. This can be used to access the other attributes.

_	đ		- 0	×
Units mm deg			Units mm deg	
Comment			Comment	
SKU			SKU	
WGsystem			WGsystem	
Room			Room	
Fastening attribute			Fastening attribute	
1-WUP Codes			1-WUP Codes	<b></b>
2-Construction stage	•		2-Construction stage	
3-Truck		=	3-Truck	
4-Pack			4-Pack	=
5-Service class			5-Service class	
6-Fre rating			6-Fre rating	
7-Species			7-Species	_
8-PEFC/FCS			8-PEFC/FCS	
9-Standard/Nrom			9-Standard/Nrom	
10-Profile		•	10-Profile	
			11-Glulam shape	
Combine attributes			12-Camber	•
Return			Combine attributes	
			Return	
			L	



Units mm deg

2024

The increased use of user attributes means that they need to be modified more often.

The user is then at the top of the

An additional shortcut key has therefore been provided in Service Pack 2024 to enable quick access to the modification of user attributes.

After modify has been called up via the <1> shortcut key, the <Ctrl+2> key combination can be used.

	-	đ	×
Units mm	deg		
Comment			
SKU			
WGsystem			
Room			
Fastening att	ribute		
1-WUP Code	5	N	<b>^</b>
2-Constructio	n stag	5	
3-Truck			
4-Pack			≡
5-Service clas	s		
6-Fre rating			
7-Species			

	_	đ	×
Units mm	deg		
Comment			
SKU			
WGsystem			
Room			
Fastening att	tribute		
16-Grade			<b>^</b>
17-Coating			
18-Machine			
19-Shift			
20-Source			
21-Supply			
22-Special to	oling		
23-Layers			
24-Layer orie	entation	1	=
25-Number o	of layers		
26-Corner co	nstruct	ion	2
27-Protection	n		-

selection list of user attributes (user attribute 1).

M	Select		M
Color			С
Mate	rial		М
Text	ure/Transparen	cy	
Name	9		N
Group	p		A
Sub g	group		U
Othe	r attributes	Ctrl+2	ø
BIM		Shift+A	, s, t

đ

 $\times$ 

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The attribute to be modified is quickly selected via a further keyboard entry. For example, entering <2> + <5> in quick succession places the cursor on user attribute 25. A (L) mouse click activates this attribute for modification.



- Export
  - Machine -> ... -> Individual control manager
    - Selective export of machine data
       In the individual control manager, it is
       possible to select several names within the
       tree, provided you are in the menu
       immediately before the machine individual
       control.

To make a selection, hold down the <Ctrl> key while clicking on the individual names in the individual control manager with the left mouse button (L).

Then right-click (R) to open the context menu. Select the new entry *Export* (only available after calculation) and the export dialog will open.

The export that is then started will only transfer the selected items to the corresponding machine file. This makes it easy to transfer individual parts and groups independently of their sorting in the individual control manager.

Exported parts

As soon as certain items have been exported to a machine file, the corresponding entries are marked with a green tick in the individual control manager.

This marking can also be set or removed manually. To do this, you will find the entry *Already exported?*.

If only a partial quantity of an item that contains several components has been exported, a grey check mark appears here, along with an indication of how many components of this item have already been exported.





- Cadwork®
- Machine -> ... -> Individual control / Individual control manager
  - Change component status
     To change the status of a component, you
     can now also click directly with the left
     mouse button (L) on the circular status
     symbol. This opens the selection menu for
     the various statuses such as Not
     calculated, Calculated, Checked with
     errors, Checked no errors. If the
     processing check reports errors for a
     component, you can change the status to
     Checked no errors after a successful
     visual inspection.
  - Shortcuts for calculated processes selected in the individual control manager In the individual control manager, you can perform the following actions for the processes currently selected in the tree structure using the usual shortcuts:
    - </> Hides all but the selected processes
    - <\*> Hides the selected processes
    - <J> Hides all processes
    - > <Delete> Deletes the selected processes
  - Combining shortcuts for visibility

As soon as the mouse pointer is positioned on a process button in the right-hand menu, the shortcuts </> or <\*> can be used to show or hide processes for this





Individual control manager




With this procedure, any combination of processes can be added with </> and hidden with <\*>. Only with a double execution: </>+</> or <\*>+<\*> are only the processes of this process type shown or hidden again. As usual, all processes are visualized by pressing <J>. Pressing <J> also interrupts the combining of visibilities.

- Sorting and combining
   In addition to Status, the attributes
   Calculation locked?, Export? and Already
   exported? can now be used to sort and
   combine parts in the individual control
   manager.
- Cancel Apply

   Cancel
   Apply

   Name
   Status

   Sub group
   Calculation locked?

   Comment
   Export?

   SKU
   Already exported?

Selection of the sorting attributes

Info window in the individual control
 The Subgroup attribute has been added to
 the info window of the individual control.
 The subgroup is often used as a further
 distinguishing attribute for production.

Machine type	Hundegger K2 UM5 (Cambium)
Machine calculation se	et: Standard_Hundegger K2 UM5 (Standard)
No.production list	524
Quantity	1
Name	Stud
Group	Internal wall
Sub group	IW - Light wall
Material	Pine
Real width	45 mm
Real height	90 mm
Real length	2400 mm
Rough width	45 mm
Rough height	90 mm
Rough length	2400 mm
Current processes:	8

 Shortcut key for locking the parts in the individual control

Locking a part in the individual control manager (lock symbol) prevents the machine data from being changed. Locking is useful after successfully checking the generated machine data. As of service pack 2024, you can use the <AltGr+L> or <*Ctrl+Alt+L> (US keyboard)* shortcut key to *Lock* or *Unlock* a part in the individual control.

This means you can if desired only use shortcut keys to check position by position in the individual control check:

- C> Trigger processing check
- Check result
- AltGr+L> or <*Ctrl+Alt+L>* (US keyboard) Lock component
- <Page down> Show next position...

If a part is locked, you will receive an error message when executing an action that is locked as a result.

In addition, functions that are not permitted are greyed out.

(M)Next position (R)Return Esc:Return	E:Modify processes	D:Delete process.	C:Process test	P:Check conversion	Ctrl+N:Recalculate	Ctrl+W:Settings	I:Info direct	H
					L ENCON	•		18

#### • Lasso in individual control

From version 30 (SP2024), machine processes can be activated with the lasso. As usual, the machining processes must be captured completely with the white lasso, whereas the red lasso enables activation by incomplete selection of the processes.



(	[1] Column	-	<b>_</b>		•
~ (	[2] Rafter		<b>V</b>		
	Drilling ø 14 mm (	*			
	Drilling ø 50 mm (2)	٠.			
	Drilling ø 18 mm (3)	۲			
	Drilling ø 14 mm (4)				
	Drilling ø 50 mm (5)	٠			
	Drilling ø 14 mm (6)	٠			
	Drilling ø 50 mm (7)	- 🗮			
	Drilling ø 13 mm (8)	- 🗶 -			
	Cut (9)	*			
	Pocket (10)	- 🌪 🛛			
	Lap (11)	- 🌞			
	Hip/valley cut (12)	*			
-	V-cut (13)	*			-
Coloritor	E Maria a Maria a Maria a Maria				
Selection o	r the sorting attributes	_			
<alt< th=""><th>:Gr+L&gt;</th><th></th><th></th><th></th><th></th></alt<>	:Gr+L>				
<ai1< th=""><th>trol manager</th><th></th><th></th><th></th><th>×</th></ai1<>	trol manager				×
<alt< th=""><th>trol manager</th><th></th><th></th><th>_</th><th>•</th></alt<>	trol manager			_	•
<alt< td=""><td>trol manager [1] Column [2] Rafter</td><td></td><td></td><td></td><td>×</td></alt<>	trol manager [1] Column [2] Rafter				×
<alt< td=""><td>trol manager (1) Column (2) Rafter Drilling ø 14 mm (2)</td><td></td><td></td><td></td><td>×</td></alt<>	trol manager (1) Column (2) Rafter Drilling ø 14 mm (2)				×
<alt< td=""><td>trol manager (1) Column (2) Rafter Drilling g 14 mm (?) Drilling g 50 mm (2)</td><td></td><td><b>~</b></td><td></td><td>×</td></alt<>	trol manager (1) Column (2) Rafter Drilling g 14 mm (?) Drilling g 50 mm (2)		<b>~</b>		×
<ali vidual con</ali 	trol manager [1] Column [2] Rafter Drilling ø 14 mm (?) Drilling ø 50 mm (2) Drilling ø 18 mm (3)		<b>*</b>		-
<all< th=""><th>CGr+L&gt; trol manager [2] Rafter Drilling ø 14 mm (2) Drilling ø 18 mm (3) Drilling ø 18 mm (3)</th><th></th><th><b>*</b></th><th></th><th>×</th></all<>	CGr+L> trol manager [2] Rafter Drilling ø 14 mm (2) Drilling ø 18 mm (3) Drilling ø 18 mm (3)		<b>*</b>		×
<all< th=""><th>trol manager (1) Column (2) Rafter Drilling ø 14 mm (3) Drilling ø 18 mm (3) Drilling ø 50 mm (4) Drilling ø 50 mm (5)</th><th></th><th><b>*</b></th><th></th><th>×</th></all<>	trol manager (1) Column (2) Rafter Drilling ø 14 mm (3) Drilling ø 18 mm (3) Drilling ø 50 mm (4) Drilling ø 50 mm (5)		<b>*</b>		×
<alt< th=""><th>CGr+L&gt; trol manager 2 2 Rafter Drilling # 14 mm (?) Drilling # 18 mm (3) Drilling # 14 mm (4) Drilling # 14 mm (4)</th><th></th><th>*</th><th></th><th>×</th></alt<>	CGr+L> trol manager 2 2 Rafter Drilling # 14 mm (?) Drilling # 18 mm (3) Drilling # 14 mm (4) Drilling # 14 mm (4)		*		×
<alt< th=""><th>trol manager [] Column [] Column [] Rafter Drilling e 14 mm (i) Drilling e 50 mm (2) Drilling e 14 mm (4) Drilling e 50 mm (5) Drilling e 14 mm (4) Drilling e 14 mm (6) Drilling e 50 mm (5)</th><th></th><th><b>*</b></th><th></th><th>×</th></alt<>	trol manager [] Column [] Column [] Rafter Drilling e 14 mm (i) Drilling e 50 mm (2) Drilling e 14 mm (4) Drilling e 50 mm (5) Drilling e 14 mm (4) Drilling e 14 mm (6) Drilling e 50 mm (5)		<b>*</b>		×
<ali< th=""><th>trol manager ) (1) Column ) (2) Ratter Drilling g 14 mm (2) Drilling g 18 mm (3) Drilling g 14 mm (4) Drilling g 14 mm (6) Drilling g 50 mm (5) Drilling g 50 mm (7) Drilling g 13 mm (8)</th><th></th><th><b>*</b></th><th></th><th>×</th></ali<>	trol manager ) (1) Column ) (2) Ratter Drilling g 14 mm (2) Drilling g 18 mm (3) Drilling g 14 mm (4) Drilling g 14 mm (6) Drilling g 50 mm (5) Drilling g 50 mm (7) Drilling g 13 mm (8)		<b>*</b>		×
<all< th=""><th>trol manager 21 Safter Drilling s 14 mm (?) Drilling s 13 mm (?) Drilling s 13 mm (?)</th><th></th><th><b>*</b></th><th></th><th>×</th></all<>	trol manager 21 Safter Drilling s 14 mm (?) Drilling s 13 mm (?) Drilling s 13 mm (?)		<b>*</b>		×
<ali< th=""><th>trol manager 11 Column 21 Rafter Drilling g 14 mm (?) Drilling g 15 mm (?) Drilling g 16 mm (?) Drilling g 16 mm (?) Drilling g 14 mm (?) Drilling g 14 mm (?) Drilling g 14 mm (?) Drilling g 13 mm (?) Drilling g 13 mm (?) Drilling (?) Pocket (!)</th><th></th><th><b>`</b></th><th></th><th>×</th></ali<>	trol manager 11 Column 21 Rafter Drilling g 14 mm (?) Drilling g 15 mm (?) Drilling g 16 mm (?) Drilling g 16 mm (?) Drilling g 14 mm (?) Drilling g 14 mm (?) Drilling g 14 mm (?) Drilling g 13 mm (?) Drilling g 13 mm (?) Drilling (?) Pocket (!)		<b>`</b>		×
<ali< th=""><th>trol manager 11 Column 12 Rafter Drilling a 14 mm (P Drilling a 14 mm (P Pocket (P) Lap (11)</th><th></th><th><b>*</b></th><th></th><th>-</th></ali<>	trol manager 11 Column 12 Rafter Drilling a 14 mm (P Drilling a 14 mm (P Pocket (P) Lap (11)		<b>*</b>		-
<ali< td=""><td>trol manager 2 [3 Rafter Drilling g 14 mm (?) Drilling g 13 mm (?) Drilling g 14 mm</td><td></td><td><b>*</b></td><td></td><td>۲ ۲</td></ali<>	trol manager 2 [3 Rafter Drilling g 14 mm (?) Drilling g 13 mm (?) Drilling g 14 mm		<b>*</b>		۲ ۲
<ali vidual con</ali 	trol manager 2) To Column 2) <b>2) Rafter</b> Drilling g 14 mm (?) Drilling g 14 mm (?)		*		
<ali< td=""><td>CGr+L&gt; trol manager Drilling g 14 mm (1) Drilling g 10 mm (2) Drilling g 10 mm (2) Drilling g 10 mm (2) Drilling g 10 mm (2) Drilling g 11 mm (3) Drilling g 10 mm (3)</td><td></td><td>*</td><td></td><td></td></ali<>	CGr+L> trol manager Drilling g 14 mm (1) Drilling g 10 mm (2) Drilling g 10 mm (2) Drilling g 10 mm (2) Drilling g 10 mm (2) Drilling g 11 mm (3) Drilling g 10 mm (3)		*		
<ali< td=""><td>CGr+L&gt; trol manager 2   2   Rafter Drilling g 14 mm (?) Drilling g 14 mm (?) Drilli</td><td></td><td>¥</td><td></td><td></td></ali<>	CGr+L> trol manager 2   2   Rafter Drilling g 14 mm (?) Drilling g 14 mm (?) Drilli		¥		

The current element is locked for machine data modification! <Return> to continue



# 2024

#### Duplicating processes

*The Duplicate* function has been added to the menu for processes in the Individual control manager. This duplicates the selected process operations.



For example, it is possible to clean out rounded corners of a lap by first duplicating the lap and then assigning a different reference side to the duplicate process.



• Switch process Ref. face for Dado/rabbet

The *Switch process Ref. face* function is also available for Dado/rabbets, making it possible to process a dado/rabbet from a different side.

As with the other processes, this function can be used via the context menu in the



Individual control manager and via the <ALT+R> shortcut key with processes selected in the main window.



Tool settings for contours

A defa The to
proces
Tool selecti
Tools (no tool)
Bevelled cutte
Circular saw
Drill End mill
InkJet Marker

A default tool can be stored for the available contour types. The tool query will no longer appear when manual processing is re-inserted.

Tool selection		Tool for rough part o	ontours	:			×
Tools (no tool) Bevelled cutter Chain saw Circular saw Dovetail mill Drill End mill Marker Universal mill	× >>>>> >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Tool data Number Description Contour type User attributes Description 1. Diameter	Type Diameter	12 FingerMill Free cont	Value 30	Add a	3 ×
New	Сору						
	Delete						
Load	Save						
					Ok	Cancel	Apply

• Machine -> Calculation

Machine configuration General End processes Length processes Markings... Contour processes Log home... Others...

Options

Profiles as a silhouette



processing. This information can be used in CAM systems for better collision control.

ontrol.	
Options: Reference Default reference side Use default reference side for log @ Ode 3	2016 Yanix 1 2 12 2.1
9 586 4         6 6 2           9 586 1         2           Tree reference side / Side 5 and side 6	To do this, in the machine configuration dialog activate the
Use fee reference ade Use Prodet contour Dodo contour Rebet contour Diang	option under <i>Options -&gt;</i> Silhouette as well as Use free

Cancel

Options- >Reference side.



The European dovetail is a special form of log home corner lap joint that is designed so that it can be produced using standard tools. This joint consists of a partial hip cut and a birdsmouth.



cadwork®

The angles of inclination of the flashings and the notch must correspond to the set angle. As a rule, the angle is 15°.

In the case of an American dovetail, a special tool with the set angle as the flank angle is required. The connection consists of a partial hip cut and an acute-angled notch.

Machine configuration		×
General	Log home connections: Dovetail	
End processes		
Length processes	Dovetail	
Markings	Calculate dovetails	-
Contour processes	Flank angle IS deg	
Log home	the second s	
Log lap		-
Tyrolean dovetail		
Dovetail		_
Others		
Options		
	<- Settings -> Ok Cancel	Apply

For both shapes, the flank angle set here must correspond to the angle in the configuration dialog *Cut/Solder -> Log home... -> Dovetail settings dialog*.

#### • Machine -> ... -> Export

• Hundegger - Consistent BVX2.1 transfer

The BVX2 interface for transferring machine data to Hundegger machines with CAMBIUM<sup>®</sup> has undergone continuous development in recent years. Specifications have also been changed in the process. Nevertheless, the machine control was quite tolerant and continued to read in BVX data correctly, sometimes with

outdated descriptions. With the latest CAMBIUM<sup>®</sup> versions, Hundegger has started to check the BVX data received -very strictly for conformity. Components that do not fully comply with the specification are no longer accepted. We have therefore scanned the BVX export for inconsistencies and corrected existing errors. With the current cadwork versions, an export to the latest CAMBIUM<sup>®</sup>- versions should work smoothly.



Gadwork

Faulty parts in CAMBIUM®

If you import an old bvx file into CAMBIUM<sup>®</sup> and find that components are classified as faulty, you must export this file again with a current cadwork version.

#### • Dado/rabbet and front slot in BTLx

In the BTLx interface description, there are no dado/rabbet and front slot operations. Although these are calculated in cadwork, they are exported as a lap or pocket.



For BTLx exports to the CAM system Lignocam, the processes analysed as dado/rabbet or front slot are exported with an additional attribute: for dado/rabbet *<UserAttribute Name="LC\_PROCESS\_TYPE" Value="AsDadoRabbet"/>* for front slot *<UserAttribute Name="LC\_PROCESS\_TYPE" Value="AsFrontSlot"/>.* This means that the strategy tables for dado/rabbet and front slot can continue to be used in Lignocam.



 Export internal thread to DSTV-NC steel Since version 30, the setting *Display internal thread setting* in the connector axes dialog can be used to define for each zone independently whether the associated

drilling should have an internal thread.



This information is exported for Service Pack 2024 via the DSTV-NC interface. Please note that the nominal diameter must be specified in the case of an internal thread.

The corresponding machining operation receives the designation *internal thread* from the machine data analysis and the nominal diameter (here M12) is displayed instead of the bore diameter.



Units mm deg Panel analysis settings

Calculation Composite control

Check processes

Export BTLx 2.1

Delete process data

Representation options

Return

Ctrl+R:Reference face color Q:C

• Machine -> Panel prefab...

In version 30 (SP2024), the menu item *Individual control has* been renamed to the more appropriate term *Composite control.* 

Open composite dialog

When opening the *composite control* in panel prefab, the composite dialog is now always opened in version 30 (SP2024). It is no longer relevant which part of an element is activated or selected. The first layer of the selected element is always opened in the composite dialog.

However, it is essential that the machine data has been calculated so that all information is available for display in the composite dialog. If the data is not available, you will receive an error message and the composite control will not open.

The dialog can be closed and reopened with the short cut key <Q>.

 5-axis contour in panel prefab
 5-axis contour processing is enabled in Service Pack 2024 for machine exports in panel prefab production. The processing can either be picked up manually in a layer (frame layer, reference side or opposite side layer) on an additionally displayed part or it is calculated automatically as process of a and can then be moved to a layer.



Dialog Ctrl+Alt+L	:Lock pa	rt
-	ī	×
Units mm deg		
Manual contour		\$
Outside contour		¢°
Inside contour		¢°
Pocket contour		¢°
Dado contour		¢°
Rabbet contour		¢°
5-axis contour		¢¢
Saw contur		¢
Mill contur		¢°
Marking line		¢°
Nail row		¢°
Nail point		o <sup>o</sup>
Glue area		¢°
Planer area		¢°
Plaster area		¢°
Insulation outline		¢°
Protected zone		¢°
Return		

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2024

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#### Panel prefab tools

Tools are used for manual processing with the *Rectangular MEP* axes on the composite or for *cutting, gluing* and *insulation* in the panel analysis settings and can be created and configured in the tool dialog. Depending on the contour type, further properties are available in the *additional attributes* area. To create a new tool, the tool data for the desired processing type previously had to be loaded from the Userprofile using tool files or existing tools had to be copied. It was no longer possible to change the contour type at a later date. With cadwork version 30 (SP2024), you have the option of creating tools for manual processing in the tool dialog with the *New* button and subsequently changing the *contour type* and thus the type of processing, for example from *nail row* to *saw line*. The available *additional attributes* of the selected contour type are automatically adjusted.

anel prefab				Wall prefabrication				
TI Wall General BTIx 2.1	Tools		1					
TI Wall General BTLy 1.1	Contour milli	ing with 16mm	<b>V</b>	Tool data		Versio	n 3 🔻	
TI Wall Casaral BTI 10.6	Nail row - co	rner	$\checkmark$	Number	203			
IL Wall General BIL 10.6	Nail row - Pla	asterboard e=62.5	<b>y</b>	Description	Cont	tour milling		
W-Mill E	Screws - igno	ore	~ V	Contour type	Mill o	contur	•	
Smith				Free cut	mach	hine specific	•	
lach			·	Tool position	right	:	•	
undegger WALL-MASTE				Additional attributes				
undegger PBA-X				1. Cutting width	16		[mm]	
				2. Complete machining	0		]	
				<ol><li>Protected area width</li></ol>	10		[mm]	
			L	<ol> <li>Closed polygon</li> </ol>	1			
				User attributes		Add	d attribute	
	New	Сору						
		Delete						
	1.000	Select tool						
	LOad							
	Load	Panel prefab.				Wall prefabri	cation	
	Load	Panel prefab.	 Il BTLx 2.1	Tools		Wall prefabri	cation	
	Load	Panel prefab. BTL Wall Genera	•• Il BTLx 2.1	Tools Contour milling with 16mm	<ul> <li>Image: A start of the start of</li></ul>	Wall prefabrio	cation	Version 3
		Panel prefab. BTL Wall Genera BTL Wall Genera	 I BTLx 2.1 I BTLx 1.1	Tools Contour milling with 16mm Nail row - corner	V	Wall prefabri Tool data Number	cation	Version 3
	Load	Panel prefab. BTL Wall Genera BTL Wall Genera BTL Wall Genera	 Il BTLx 2.1 Il BTLx 1.1 Il BTL 10.6	Tools Contour milling with 16mm Nail row - corner Nail row - Plasterboard e=62.5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Wall prefabrie Tool data Number Description	cation	Version 3
	Load	Panel prefab. BTL Wall Genera BTL Wall Genera BTL Wall Genera TW-Mill E	 il BTLx 2.1 il BTLx 1.1 il BTL 10.6	Tools           Contour milling with 16mm           Nail row - corner           Nail row - Plasterboard e=62.5           New tool           NR - LVL - Top & Bottom	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Wall prefabrie Tool data Number Description Contour type	cation	Version 3 0 Marking line
	Load	Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith	 il BTLx 2.1 il BTLx 1.1 il BTL 10.6	Tools           Contour milling with 16mm           Nail row - corner           Nail row - Plasterboard e=62.5           New tool           NR - LVL - Top & Bottom           Screws - ignore	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Wall prefabrie Tool data Number Description Contour type Additional attributes	cation	Version 3 0 Marking line
	Load	Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach	 Il BTLx 2.1 Il BTLx 1.1	Tools           Contour milling with 16mm           Nail row - corner           Nail row - Plasterboard e=62.5           New tool           NR - LVL - Top & Bottom           Screws - ignore	***	Wall prefabrie Tool data Number Description Contour type Additional attributes 1. Color	cation	Version 3 0 Marking line
	Load	Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL		Tools       Contour milling with 16mm       Nail row - corner       Nail row - Plasterboard e=62.5       New tool       NR - LVL - Top & Bottom       Screws - ignore	>>> >>>	Wall prefabrie Tool data Number Description Contour type Additional attributes 1. Color 2. Marking position	cation	Version 3 0 Marking line 1 1
	Load	Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-)	 I BTLx 2.1 I BTLx 1.1 I BTL 10.6 -MASTE	Tools       Contour milling with 16mm       Nail row - corner       Nail row - Plasterboard e=62.5       New tool       NR - LVL - Top & Bottom       Screws - ignore	>>> <b>&gt;</b> >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Wall prefabrie Tool data Number Description Contour type Additional attributes 1. Color 2. Marking position User attributes	cation	Version 3 0 Marking line 1 1 Add attri
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-> Wall prefabrica	 I BTLx 2.1 I BTLx 1.1 I BTL 10.6 -MASTE x tion	Tools       Contour milling with 16mm       Nail row - corner       Nail row - Plasterboard e=62.5       New tool       NR - LVL - Top & Bottom       Screws - ignore	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Wall prefabrie Tool data Number Description Contour type Additional attributes 1. Color 2. Marking position User attributes	cation	Version 3 0 Marking line 1 1 Add attri
	LUGG	Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-) Wall prefabrica	 il BTLx 2.1 il BTLx 1.1 il BTL 10.6 -MASTE x	Tools       Contour milling with 16mm       Nail row - corner       Nail row - Plasterboard e=62.5       New tool       NR - LVL - Top & Bottom       Screws - ignore	>>> <b>&gt;</b> >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Wall prefabrie Tool data Number Description Contour type Additional attributes 1. Color 2. Marking position User attributes	cation	Version 3 0 Marking line 1 1 Add attri
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-2 Wall prefabrica	 MASTE K tion	Tools       Contour milling with 16mm       Nail row - corner       Nail row - Plasterboard e=62.5       New tool       NR - LVL - Top & Bottom       Screws - ignore	*****	Wall prefabrie Tool data Number Description Contour type Additional attributes 1. Color 2. Marking position User attributes	cation	Version 3 0 Marking line 1 1 Add attri
	LOR	Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-2 Wall prefabrica	 MASTE K	Tools         Contour milling with 16mm         Nail row - corner         Nail row - Plasterboard e=62.5         New tool         NR - LVL - Top & Bottom         Screws - ignore	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Wall prefabrie	cation	Version 3 0 Marking line 1 1 Add attri
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica	 I BTLx 2.1 I BTLx 1.1 I BTL 10.6 MASTE x tion	Tools Contour milling with 16mm Nail row - corner Nail row - Plasterboard e=62.5 New tool NR - LVL - Top & Bottom Screws - ignore	22222	Wall prefabrie	cation	Version 3 0 Marking line 1 1 Add attri
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica	 I BTLx 2.1 I BTLx 1.1 I BTL 1.0.6 MASTE x tion	Tools Contour milling with 16mm Nail row - corner Nail row - Plasterboard e=62.5 New tool NR - LVL - Top & Bottom Screws - ignore	22 <b>2</b> 222	Wall prefabrie	cation	Version 3 0 Marking line 1 1 Add attri
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica	 il BTLx 2.1 il BTLx 1.1 il BTL 10.6 MASTE x tion	Tools Contour milling with 16mm Nail row - corner Nail row - Palsethoard e=62.5 New tool NR - LVL - Top & Bottom Screws - ignore	××××××	Wall prefabrie	cation	Version 3
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica	 	Tools         Contour milling with 16mm         Nail row - corner         Nail row - Plasterboard e=62.5         New tool         NR - LVL - Top & Bottom         Screws - ignore	×>>×	Wall prefabrie	cation	Version 3
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica		Tools Tools Nail row - corner Nail row - corner Nail row - Patserboard e=62.5 New tool NR - LVL - Top & Bottom Screws - ignore Only for saw- and mill contours	>>> <b>&gt;</b> >>>	Wall prefabrie	cation	Version 3 0 Marking line 1 1 Add attri
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger VALL Hundegger PBA-3 Wall prefabrica		Tools         Contour milling with 16mm         Nail row - corner         Nail row - Plasterboard e=62.5         New tool         NR - LVL - Top & Bottom         Screws - ignore	>>> <b>&gt;</b> >>>	Wall prefabrie	cation	Version 3 0 Marking line
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica		Tools         Contour milling with 16mm         Nail row - corner         Nail row - Plasterboard e=62.5         New tool         NR - LVL - Top & Bottom         Screws - ignore         Only for saw- and mill contours         New       Copy         Delete	2	Wall prefabrie	cation	Version 3
		Panel prefab. BTL Wall Genera BTL Wall Genera TW-Mill E JJSmith Mach Hundegger WALL Hundegger PBA-3 Wall prefabrica		Tools         Contour milling with 16mm         Nail row - corner         Nail row - Plasterboard e=62.5         New tool         NR - LVL - Top & Bottom         Screws - ignore         Only for saw- and mill contours         New       Copy         Delete         Load       Save	2	Wall prefabrie	cation	Version 3



 Additional attribute *Ignore protected area* for manual nail rows For manually defined nailing rows using the *Rectangular MEP axis,* cadwork version 30 (SP2024) provides the additional attribute *Ignore protected area* in the tool dialog.

👫 Select tool				×
Panel prefab		Wall prefabrication		
BTL Wall General BTLx 2.1 BTL Wall General BTLx 1.1 BTL Wall General BTL 10.6 TW-Mill E JJSmith Mach Hundegger WALL-MASTE Hundegger PBA-X Wall prefabrication	Tools         Contour milling with 16mm         Marking - New tool         Nail row - corner         Nail row - corner         Nail row - Plasterboard e=62.5         NR - LVL - Top & Bottom         Screw fix - Ignore protected area         Screws - ignore         Only for saw- and mill contours         New       Copy         Delete	Tool data Number Description Contour type Nail distance Additional attributes 1. Optimize nail spacing 2. Ignore protected area User attributes	102         Screw fix         Nail row         250         0         1	Version 3
		·	Ok	Cancel Apply

If the value 1 is set for this option, the nailing row is not interrupted by a protected zone surface, even if the option *Interrupt nailing in protected zone* is set in the *Panel analysis settings -> General*.

If the value 0 is set for this option, the row of nails is interrupted at protected zone surfaces as before.

 Consider lengthening/shortening end-type on elements in the framework Up to now, the lengthening/shortening end-type has not been taken into account when determining the length of the framework elements. As a result, framework elements are not exported in their true length.

In version 30 (SP2024), you can specify whether the lengthening /shortening endtype should be taken into account when exporting the framework elements. For this purpose, the new option *Consider lengthening/shortening on framework elements* has been added in the *Panel analysis settings -> Extra settings*.

General	Extra settings	
Names config.		
Extra settings		
Material	Max distance for panel joints 6 mm	
	Export drillings in 1st layer above	
	Calculate laps in frame work	
	Calculate off cuts for top and bottom plates	
	Consider lengthenings/shortenings on framework elements.	
	Structure attributes	
	Rotate R.V. length axis 90 deg. when exporting	
	Separate cuts with different inclinations	
	O Do not combine nail rows	
	Combine nail rows, that are shorter than their nail spacing	
	O Combine nail rows, which are shorter than 0 mm	
	Use the nail spacing of the longer nail rows	
	O Use nail exterior	
	<ul> <li>Use nail interior</li> </ul>	
	Cladding width taken into account for nail edge distance     (     Vieible width	
	Bridging depth for nailing 0 mm	
	Max distance from panel edge to use exterior nail spacing 500 mm	





Weinmann WUP export *without* consideration of lengthening/shortening end types on elements in the framework:



\*.wup file without end-type consideration loaded in Weinmann WupEditor Professional

Weinmann WUP export *with* consideration of end type lengthening/shortening of elements in the framework:



\*.wup file with lengthening/shortening considered loaded in Weinmann WupEditor Professional

- Weinmann WUP 3.5 version
   In cadwork version 30 (SP2024) the export Weinmann WUP 3.5 is available. When exporting with this interface version, the previous keywords for the machining operations lap (FRZ, FRY) and drilling (BOZ, BOY, BOX) are replaced by the keywords PAF PP and PAF MP respectively. The default value 0 is assigned as the tool index so that the machine takes over the selection of the tool.

   A function key has been added to the *Machine* category for this output.
- Insulation in the Panel analysis settings
   In version 30 (SP2024), it is possible to assign insulation elements that lie completely within the framework to a separate layer 0. For this purpose, the *Insulation* column has been added in the *Panel analysis settings -> Name config.* Elements that are assigned to this category and lie completely within the framework are exported in the reference side layer 0 or in the opposite side layer 0.

- 0	×
Units mm deg	
Panel analysis settings	
Calculation	
Composite control	
Check processes	¢
Export WUP 3.5	$\checkmark$
Export WUP 3.4	
Export WUP 3.3	
Export WUP 3.3 Export WUP 3.2	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1 Export WUP 2.0-2.2	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1 Export WUP 2.0-2.2	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1 Export WUP 2.0-2.2 Delete process data	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1 Export WUP 2.0-2.2 Delete process data	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1 Export WUP 2.0-2.2 Delete process data Representation options	
Export WUP 3.3 Export WUP 3.2 Export WUP 3.0-3.1 Export WUP 2.0-2.2 Delete process data Representation options	

el analysis settings						
General			Names confi	g.		
Names config. Extra settings Material	Name	Frame BottomPlate Lintel Nogging SillTrimmer Stud TopPlate	Panel Bracing	Batten	Cladding	
		Insulation Stonewool				
		Built-in part (EBT)				
	Show only used					
Floor	Roof				Ok Cancel Ap	pply



Whether an insulation element is assigned to reference side layer 0 or opposite side layer 0 can be determined by the alignment of its height axis.



All other elements that lie within the framework and are not assigned to the frame column in *Panel analysis settings -> Name config*. are exported in a higher reference or opposite side layer.

If you do not add any elements to the *Insulation* column in the *Panel analysis settings -> Name config.* tab, all elements that lie completely within the framework are exported in reference side layer 0 (PLI0) for the Weinmann WUP 3.4 export as before.

If you export with the new Weinmann WUP 3.5 export, it is necessary to configure the insulation in the *Panel analysis settings -> Name config.* in order to create a layer PLI0 or PLA0.

## News Version 30 (SP2024)

Machine -> Others... -> Docking saw
 Tenons cannot be milled on cross-cut
 systems. Instead, an off cut was previously
 calculated at the end of the tenon. For
 some docking saw systems (e.g. Stromab),
 these sections were problematic for tenons
 on bevel cuts, as the off cuts plane
 extends beyond the rough part.
 In version 30 (SP2024), a further off cut is
 added so that the part is always cut within
 the rough part. If the docking saw system
 supports V-cuts, the two cuts are
 combined into one V-cut. Tenons without
 backcut are cut along the tenon, tenons
 with backcut are cut at right angles.





#### The Activate attribute -> Docking saw

F-key function activates parts with right-angled off-cuts in order to filter them and decide whether they should be produced manually or on a docking saw system. Previously, it was not possible to execute the function without first calculating machine data.

As of version 30 (SP2024), this function key can also be used without calculated production list numbers, without a machine license and without calculated machine operations. If machine data is already available, it is used to determine the relevant components. However, the calculation time of the function is extended if no machine data is available and again if no production list numbers have been calculated, as in this case each component must be examined individually.



Shop drawing -> Piece-by-piece
 The text with the macro no.
 *1107#nesting volume number* from
 the layout file specifies the assigned
 numbers of the nesting volumes for
 the shop drawing export. Previously,
 the macro was only supported for
 element type panel. With service pack
 2024, element type beam is also
 exported with their assigned nesting
 volume number.

X-sec corr. pos. height: 1031#X-secCorrPosHeight Nesting vol. number: 1107#NestingVolNo Volume: 4009#Volume Macro in piece-by-piece - 2dc layout
Nesting vol. number: 2001000, 2001001
201 Name: Floor panel Quantity 6
Result exporting element type
Nesting vol. number: 2000001, 2000002, 2000003, 2000004, 2000005, 2000006
12 Name: Tread Quantity:6

Result exporting element type

Service pack 2024 introduces an additional function for the new shop drawing export of hip/valley rafters according to the method "Tracing lines all rough part edges". Information on the roof slope, machine angle and reference to the location of the eaves is provided within the "Tracing lines all rough part edges method " method.



The marking for the eaves is at the top left of the shop drawing export, while the note for the roof slope is at the top right. The values for the machine angle are traditionally located on the ridge and on the eaves of the hip/valley rafter.



It should be noted that the positioning of the notes is fixed and cannot be positioned individually.

To be able to customise the text formatting like font, color and size of the Eave and Slope information the text macro *6209#* has to be used. This is a new macro in SP2024 and must be added manually to your existing piece-by-piece layout file as text *Eaves / Slope* with the name *6209#* at the location shown below. Otherwise, default formatting will be used.

Setting for Hip/Valley Roug	h part dimensioning method
<mark>Left</mark> Right	<ul> <li>Color definition of texts and dimensions of the rough part method related to the left and right side of the component (viewing direction from eaves to ridge).</li> <li>The content and presentation of the text can be changed as desired and is output accordingly in the floor plan.</li> </ul>
Lengthwise dimensionsing The color of the dimensions is output according to the color definition of texts an All other properties are taken from this dimensioning	d dimensions of the rough part method (see above).
	53
All other dimensions The color of all other dimensions is always output in color 8 (white/black) and car All other properties are taken from this dimension	nnot be set.
+	-2 <sup>7</sup>
Angular dimension The color of the dimensions is output according to the color definition of texts an All other properties are taken from this dimensioning	d dimensions of the rough part method (see above).
ېن بې بې	
View description	Definition of view description for floor plan and top view. The content of the text shoul not be edited
Machine angle	Color definition is not considered
Plumb	Color definition and content is considered
Eaves / Slope	Color definition is considered New in Version 30

This text marco has been added to most recent default layout files supplied by cadwork, which can be downloaded via Userprofile (user's settings) -> Manage catalog/userprofile in the Piece-by-piece - Shop drawings register



022

• TIF file (\*.tif)

To create appealing rendered and shaded representations, the option *Ambient Occlusion enabled* can be selected in the Graphic options dialog, which can be called up via the left-hand menu.

Graphics options		×
General	Texture	
🗘 Wireframe	Texture representation	
D Hidden lines	☑ Display material texture	
Dashed hidden lines	☑ Display bitmaps	
📁 Shaded 1	Connector axes representation	
Representation	Background colour	
Texture		
Transparency	Ambient Occlusion	
Shadow	Ambient Occlusion enabled	
Event mede	Quality	
Expert mode	Nice V	
	Strength	
	1	
	Radius	
	1	
Expert mode	Set defaults Ok Cancel	Apply

The respective display can be exported as a tif or jpg file via *Export -> Image (\*.tif, \*.jpg).* In previous version when using the *Ambient Occlusion enabled* option, the resolution factor has to be set to 1 for error-free export. This significantly limited the resolution of the generated image.

This restriction was removed in Service Pack 2024, so that higher-resolution images can now also be exported.



With regard to the possible resolution factor, however, there are still restrictions resulting from the graphics card and graphics driver used.

You can obtain detailed information on the restrictions via the *Resolution info* button in the image export save as dialog.





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Files... -> DXF (\*.dxf)

The export to DXF files has been improved so that spline lines can now also be taken into account. The export from 3D is done in the DXF format AC1027 for AutoCAD 2013 to AutoCAD 2017.

Storey/BIM Manager Storey 1	Units mm deg
	-> 3D file (*.3d)
	-> IGES (*.igs)
	-> DXF (*.dxf)
	-> ACIS (*.sat)
	-> STEP (*.stp)
	-> DTH (*.stp)
	-> IFC (*.ifc)
$\leq$ ,	-> Rhino (*.3dm)
	-> STereoLithography (*.
	-> Wave front (*.obj)
	-> Artlantis (*.atl)
	-> 3D Viewer (*.ivz)
	-> WebViewer (*.html)
	-> BIMteam (cloud upload

• Files... -> IFC (\*.ifc)

News on exporting IFC files can be found in the IFC chapter.



#### \* IFC

- ➢ IFC import
- Certification for IFC 4 Reference View

cadwork has received certification for the export of IFC 4 - Reference View from buildingSMART. This means that the software complies with the international standard IFC 4 and can therefore export models according to the specifications of buildingSMART.

This certification ensures smooth interoperability and the exchange of models between different software applications that use the IFC standard.

Vendor 🕈	Product \$	Schema 🕈	Exchange Requirement	/ ÷ Export	Status 🕈	Started 🕈	Completed 🕈
cadwork Informatik	cadwork 3D	IFC4	Structural Reference Exchange	Export	Finished	2019-10- 07	2023-07-13

#### Exchange objects

A current Hoops version has been integrated into Service Pack 2024, which promises improvements in terms of both display quality and performance/stability.

It is now also possible to visualize exchange objects in 2D planes. The elements are displayed as an intersection in the plane.

Currently, the points of the visualized elements cannot be selected and used for construction.





IFC Property Mapper and layer mapping

You can use the property mapper to transfer/"map" attributes from the IFC file to the imported and converted elements in the 3D file.

Previously, this mapping only worked for the properties of the IFC file, but now the information of the IFC layer can also be transferred for the elements of the 3D file. Like the properties, the IFC layer is also created as a cadwork attribute.

👫 Add new entry		×		
PropertySet/Entity Name	Layer			
Property name	Layer			
cadwork attribute		~		
Mapping source	FromEntity	~		
Create user attribute a	acc. property name			
Create another mapping	ng attribute Ok	Cancel		
		TO FUDALED	intellungen	
		12-Layer		P-SANR-FIXT-OTL



024

#### ➢ IFC export

 Export of multilayer wall - IfcMaterialConstituentSet We already introduced the option of exporting multilayer walls to IFC files in version 30.
 With the service pack 2024, you can export these multilayer walls not only with the

Μ	ultiLayer Export for Wall
	O None
	O Material Layer Set (IFC4, layer as information in walls)
	Material Constituent Set (IFC4, layers as materialised elements)

IfcMaterialLayerSet, in which the layer definitions of a wall are included as informative text in the IFC file, but optionally also using the IfcMaterialConstituentSet.

With this option, you can respond to the requirements of the project partner in an even more differentiated way and thus optimally support the subsequent planning steps.



Wall imported on the left as a Material Constituent Set: The individual layers are available as materialized volumes including the wall rough volume.

On the right, the same wall as a Material Layer set: the wall rough volume is generated as a volume, the information of the defined wall layers is defined as attributes/properties.



Script-populated attributes in the export
 Attributes filled with scripts are taken into account when exporting in the
 cadwork3dproperties property set.

			Configuration	
List/Shopdrawing	Auto1	Script info	Type script populated	
		Script: ListShop	р.ру	
		<pre># Copyright # All right # This file # and is re # file that import cadw import geom cloments</pre>	2022 Cadwork Informatique Inc s reserved. e is part of PartClassifier, eleased under the "MIT License / should have been included as p work metry_controller as gc	Agreement' part of th

This means that attributes and properties generated or influenced by scripts are exported in the standard property set of cadwork. This is particularly relevant for users who create complex attributes in their models using Python scripts. The automatically generated information is now also retained when exporting IFC files.

16-Grade	
17-Coating	
18-Machine	
19-Shift	
20-Source	
21-Supply	
22-Special tooling	
23-Layers	
24-Layer orientation	
25-Number of layers	
26-Corner construction	
27-Protection	
List/Shopdrawing	Shop Drawing

		1				
Pr	operties	Location	Classif	ication	Relations	
₽₽		Name				Value
	Eleme	ent Specific	2			
	Guid			3ItC 1BL	rDDffU27Z0v	waRnm
	IfcEr	ntity		IfcMem	ber	
	Pred	lefinedType		NOTDER	INED	
		Quantities				
	Cadw	ork3dProp	erties			
	-List/	Shopdrawing	)	Shop Dr	awing	



#### \* Point cloud

General information

As usual, you can only use the Point cloud interface via the corresponding license. on the following pages the new features are described.

➤ Import

In Service Pack 2024, you now have the option of dragging and dropping a Point cloud directly into your 3D file. Nothing else has changed in terms of import behaviour. The usual options via the menu or function keys are still available to you.





#### Point cloud Manager

The Point cloud Manager has been expanded to include the multiple selection function. Here you have the option of activating and controlling multiple sections.

You can use <Ctrl>+(L) to individually pick planes, sections and slices with the mouse and add them to your selection.

		Cutting plan	nes	
Add tools				
O Plane	🔘 Se	ction	Slice	
Direction				
⊖ x	() XY		○ x	
ΟY	⊖ YZ		() Y	
<b>o</b> z	$\bigcirc$ ZX		() z	
3 points	○ XY	Z	<ul> <li>3 points</li> </ul>	
Add				
Plane	τ Visible	Apply Global		
✓ Plane			Remove	
Ridge_Y	(			
Dormer				
Dormer				
TopEdge	e Ceiling 🛛			
lopEdg	екв 🗹		>	
* Section	. xv		<b>^\</b>	
× Slice			v	
* Slice with	th D=200 7			
Slice wit	th D=100 Z			
Slice with				

You can use <Ctrl+Shift>+(L) to select an entire portion of the list. Pick first and last Plane, Section or Slice with (L) and it adds everything in between to selection.

	Cutting p	lanes
Add tools		
nes O Plane	Section	Slice
Direction		
⊖ x	🔾 XY	○ x
○ Y	⊖ YZ	<u>О</u> Ү
<b>O</b> Z	🔘 ZX	○ z
3 points	◯ XYZ	3 points
Add		
Tool manageme	nt	
Plane	Visible Apply Globa	
✓ Plane		Remove
Ridge_		
Dorme		
TopEde	ae Ceiling 🔽 🔽	<b>1</b> <sup>st</sup> (1)
TopEde	je RB 🔽 🗹 🗹	
✓ Section		
Section	n_XY 🗌 🗌 🗹	
✓ Slice		
Slice w	ith D=300_Z	
Slice w	ith D=100_2	► V 2 <sup>nu</sup> (L)
		(-)



### Clipping box

The Zoom All behaviour of the clipping box has been adjusted so that when the clipping box is active, right-clicking (R) on Zoom All zooms to the geometry of the clipping box and not the geometry of the bounding box.

Furthermore, the BIM attributes have been added to the clipping box. You now have the option of controlling the visibility of the clipping box via the storeys.





#### Plugins

The further development of functionality in cadwork is largely based on requests and suggestions that we receive from valued customers.

Customer requests also include requirements that cannot be implemented at short notice or are so specific that they cannot be incorporated into the general range of functions. In both cases, the cadwork API can be helpful, which can be used to implement a specific functionality as a plugin. Although the plugin is not fully integrated into the cadwork functionality, it can use large areas of the existing functionality, access the data and manipulate it.

The API offers the great advantage that its use can be learned by any cadwork user. After becoming familiar with the cadwork API, plugins can be developed independently to implement company-specific functionalities and thus customize cadwork.

#### > General

With cadwork version 30 (SP2024) it is possible to connect cadwork 3D directly to the execution of an API plugin. This is done by starting the 3d.exe with the argument "/PLUGIN=PluginName". This can be implemented using a batch file \*.bat file, for example.

As soon as cadwork 3D is started in this way and the 3D file has been loaded, the plugin defined in the argument is automatically started. It does not matter whether it is a plugin developed in C++ or Python. However, it is important that the specified plugin can be found under the corresponding name in the regular plugin directory in the userprofil\_30 folder (...\userprofil\_30\3d\API.x64). The following lines with the PATH and START instructions show how a batch file for starting cadwork with automatic execution of a plugin can look.

PATH=C:\Program Files\cadwork.dir\exe\_30\pclib.x64;C:\Program Files\cadwork.dir\exe\_30\LxSDK.x64\bin\dlls; C:\Program Files\cadwork.dir\exe\_30\LxSDK.x64\bin;

start /wait /max C:\Program Files\cadwork.dir\exe\_30\3d.x64\3d.exe "C:Users\Users\Documents\TestFile.3d" /PLUGIN=example\_plugin

As can be seen, certain paths to the cadwork installation directory are defined first. This is necessary so that they can be found by cadwork 3D. The drive names and paths must be adapted to the cadwork installation on the system used.



> cadwork API - Help and discussion forum

We would like to take this opportunity to point out that there is a possibility on the "GitHub" platform to ask questions about the use of our API and to exchange information with other users. Please use the following link: <u>https://github.com/cwapi3d/cwapi3dpython/</u>

A one-time registration is required to use the platform. You will find the "Sign up" button in the top right-hand corner.

In the "Discussions" category, you can ask general questions about the use. To do this, you can open a new discussion using the "New discussion" button. You will then be shown various categories for this discussion. As soon as you have created a discussion, it is visible to other users. You can also participate in existing discussions at any time.

If you notice any misconduct when using our API, you can report this in the "Issues" category. You can also submit requests for new functionalities here.

C cwapi3d/cwapi3dpython · Discus ×	+			-	D	×
← C ⋒ ⊡ https://github.com/cwapi3d/o	cwapi3dpython/discussi	ons 🗄 A® 🏠 🗘	ל≟ (	€¥ €		<b>0</b>
Product ~ Solutions ~ Open Source ~	Pricing	Q Search or jump to	Sign in	Sign up		<b>?</b>
Gradie Comparison Comp		↓ Notifications <sup>9,9</sup> Fork 8	☆ Star	16 👻		<u>R</u>
<> Code 💿 Issues 12 12 Pull requests 1	Discussions	🕑 Actions 🖽 Projects 🛈 Security 🗠 Insights				0
Add extra references V Ideas · Pvmdark						₹ 1000 +
Q isopen		Sort by: Latest activity • Label •	Filter:	Open 👻		
Categories          Q) View all discussions         General	Discussions	Machine Controller method parameter clarification etwatki asked 46 minutes ago in <u>Q&amp;A</u> · Unanswered	6	Ø 1		
💡 ldeas 📷 Polls	↑ 1	Modules in python Cadwork plugin usai-sylvain asked 2 days ago in <u>Q&amp;A</u> - Answered	<b>()</b>	<b>8</b>		
🙏 Q&A 즑 Show and tell	(† 1)	Try to get an Auto name for Flachstahl if it ist bigger then 160mm Nairda10 asked on Jun 12, 2023 in <u>Q&amp;A</u> · Unanswered	Ф	⊘ 0		
Most helpful Last 30 days	↑ 1	Problem importing pandas and numpy package NickatLCB asked on Apr 19, 2023 in <u>General</u> · Unanswered	<b>6</b> 2	Ø 1		
Brunner246 Ø 1	(† 1) 📳	Accessing IFC attributes help Claudiubrb asked on Apr 3, 2023 in <u>General</u> - Unanswered	e	⊘ 0		
Community guidelines	↑ 2	Add extra references Pvmdark asked on Jan 10, 2023 in <u>Ideas</u> - Unanswered	Φ	⊘ 0	•	日 袋



> BCF Manager – Connect to BIMcollab platform

The extension of the BIM tools through the integration of the Software Development Kit (SDK) from BIMcollab as a plugin represents a step in the further development of the BIM tools in cadwork 3D. This extension enables a seamless connection to BIMcollab, a cloud-based platform that optimizes collaboration and communication in the field of BIM. In order to use the plugin, users need to create an account with BIMcollab. The first time they use it, they will be asked to create a login. On the cadwork side, the *IFC Import/Export* and *BCF Manager* licenses are required.

The BIMcollab SDK plugin allows users to access BIMcollab functions and resources directly and integrate them into their existing BIM workflows. By utilizing these SDK functionalities, users can make their workflows more efficient as they can now interact directly with the BIMcollab platform without having to switch between different applications.

This BCF Manager not only provides the ability to connect to the BIMcollab cloud, but also supports the use of local BCF XML files. This means that projects can be flexibly stored and edited both in the cloud and locally, depending on individual user requirements and preferences.

This extension removes obstacles that previously hindered smooth communication and coordination between different project participants.

- Connect with the cadwork BCF Manager or BIMcollab Zoom
- 1. Open the cadwork BCF Manager or BIMcollab Zoom and click on the "Connect to BIMcollab platform" icon.

l	Export Import	• • • •	OK Cancel Apply	/

- 2. In the "BIMcollab" field, enter the following information:
  - a. join.bimcollab.com to connect to your free BIMcollab project.
  - b. the URL of your private WebRoom (e.g. BIMcollab ) to connect to the private WebRoom.
- 3. Click on "Connect"
- 4. A new window will open. Enter your login details and click on "Log in".
- 5. Select the project to which you want to establish a connection and click OK.





BIMcollab BCF Manager		×		
🖟 🕈 🗒 🖕 🖉 🗸 🦉 🗸		^		
☐ Offline	All issues 💡			
	👯 BIMcollab BCF Manager - Connect to BIMcoll	ab X		
	BIMcollab 2 toin bimcollab.com	✓ <b>3</b> Connect	ς.	
	Project 5		BIMcollab Login	- 🗆 X
	BIMcollab Example project My first BIMcollab project		ioin.bimcollab.com	
	Active, Resolved, Visible for you		bgreen@bim.col	-
	Remember me	< Cancel		
			Cancel	

BIMcollab help center

Under the following link you will find the help center portal to report issues/bugs or log wishes/requests:

https://helpcenter.bimcollab.com/portal/en/kb/articles/edit-and-comment-onissues#BIMcollab Zoom and the BCF\_Managers

Source: <u>https://helpcenter.bimcollab.com/portal/en/kb/articles/connect-from-bcf-managers-or-bimcollab-zoom</u>



> Joinery Tool Center (JTC)



The plugin is updated independently of the annual cadwork versions. This has led to the release of JTC version 3 in December 2023, which contains further improvements and changes.

Changes to the design

Based on customer feedback, small adjustments were made to the design and structure.



- New "Step back" function
   Previously, processes created by the JTC had to be deleted manually. Now it is possible
   to undo individual processing steps. The "Step back" function <AltGr>+<Z> can be
   used to undo any action performed in the plugin without changing previous calculation
   results.
- Hardware configurator database
   The hardware configurator database has been adapted.
   Manufacturer configurations can now be selected and set directly.
   We have also added many typical furniture fittings to the selection options. You can change and save these according to your own requirements. You can also add your own catalog elements to the hardware configurator.
- Save & load default settings

The settings selected by the user in the various dialogs can be saved and loaded as default settings. Defining default settings speeds up working with JTC, as the dialogs are always opened with the user-specific settings.



#### \* Tools

> OptiPanel

Version 2.10.x of the OptiPanel panel nesting optimization was made available for the delivery of cadwork version 30. Version 2.12.x will be delivered with Service Pack 2024, if required licence bit is active.



OptiPanel - 4 step nesting optimization OptiPanel - Step 4 Results

Numerous bug fixes and improvements have been implemented during this year. You can obtain an overview of all bugfixes and improvements at any time in OptiPanel itself via *Help* -> *Release notes*.





Below a list with a summary of key improvements:

- It is possible to undo or redo up to 50 steps. Previously, there was a limit of ten steps.
- The optimization algorithm for polygonal parts and free rotations has been updated and offers improved performance and new parameters.
- Support for additional attributes to keep panels with identical attributes together (block raw panel on attribute).

STEP 1	← Algorithm choice	
STUCK	Since you enabled "execute all algorithms" in the	settings, all the options below are checked:
	Rectangular pieces only	Polygonal pieces (Professional)
	Cutting direction: Indifferent	Advanced calculation for a shorter panel length
	Recover drops / scraps	
		<ul> <li>Polygonal pieces free rotation (Professional) (Beta)</li> </ul>
		Explore the tree of possibilities
	Fast calculation	Saw cut by milling (longer calculation time)
	Faster Better results 0 %	Rotate pieces at angles multiple of 90° only
STEP 2		Faster Better results
PIECES		Attempts by piece: 42 %
		Fitting pieces together: 0 %
		Authorize piece(s) to be put in other piece(s)'s openings
	L	
	- Common calculation settings	
	Saw cut thickness (mm):	
	Machining cost (€/m):	1.000 :
	Block raw papel on attribute: None (default)	•
	- Name	•
	Incremental raw panels mode: Length	
	Authorize non-incremental pi width     Group	
. 7	Use only the widths defined is	
$\sim$	Wooden fibers d	
	-User calculation settings Order list number	ber Pr
	× Preprocessing (not used wi	er
	Storey	
	Nestings reference corner	
STEP 4	Open o	ptimization user settings

- It is possible to define an edge distance per edge for each nesting volume to position the panels to be nested.
- In the table of nesting volumes, it is possible to edit the values for the maximum length and the increment for the automated creation of new nesting volumes.
- The material costs can be predefined for lineal meters and square meters.
- It is possible to import the nesting volume list from any OptiPanel project file.
- There is a warning message if OptiPanel cannot process imported geometry information.
- In the nesting volume and panel tab, previously selected nesting volumes and panels can be duplicated using the *Duplicate* button.
- Duplicating panels may only be used if OptiPanel is used without a connection to cadwork. When importing panels from cadwork, duplicating these panels leads to an incorrect reimport of the optimization results back into cadwork, as the number of panels is no longer consistent.



- BIMteam cloud platform
- General information

Version 23 introduced the WebViewer based on HTML5 files as a platform-independent visualization option for cadwork 3D models. The WebViewer is a helpful tool for providing 3D models to customers or partners. Over time, however, we have realized that the functionality has become increasingly limited due to manufacturer and web browser restrictions. The background to this is that HTML files can be circulated with malicious scripts and therefore represent a considerable security risk. HTML files exported from cadwork 3D are also very large, which makes sending them by email very cumbersome. For these reasons, we introduced BIMteam with version 30. The local WebViewer export will continue to be supported, but further developments of the viewer will only be developed for BIMteam.

Overview

BIMteam is a cloud platform with an integrated WebViewer and constantly evolving features. You can use the platform to collect and manage your project-relevant files in one place. BIMteam is made available on a server infrastructure managed by cadwork. The platform can be accessed via any web browser. Register to test the platform free of charge at <a href="https://bimteam.cadwork.ch/">https://bimteam.cadwork.ch/</a>. You can find a step-by-step video on our YouTube channel. BIMteam is already being used by some of our clients, mainly in the civil engineering field. It is still in the development phase as new functions are constantly being added. You can find an overview of the current status of the BIMteam solution on the following pages.

Sign in to BMCeam		Hello! Don't have an account?
Password	<b>Ø</b>	Sign Up
Remember me Forgot Your Password?      Sign In		

To be able to use BIMteam and its range of functions, you must first register, which is free of charge. BIMteam offers packages that can be purchased on a monthly basis as required. The "Free" package can be used free of charge and is available to every cadwork user after registration. There are four other packages ("Tiers"), each of which allows more users, storage space and projects to be managed. Your selected tier can be extended with additional functionalities, e.g. for the WebViewer, if required. A detailed list of the tiers and their extensions can be found <u>here</u>.



- Structure
  - Organization

BIMteam allows you to create and manage multiple organizations. Organizations can contain projects, users and payment information for corresponding license packages. Users within an organization can be assigned to different teams. Access authorizations are managed by administrative users.

• Projects

You can store associated files under the projects. BIMteam not only supports cadwork files (\*.3d, \*.2d or \*.cwlm), but also files that are important for the project, such as \*.ifc, \*.dxf or \*.dwg or \*.pdf. These files can be made available to customers and other stakeholders using shared links. The viewer opens in the browser as usual via the link. The administrator can set which authorizations the individual users or teams have.


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Exporting viewer files from cadwork 3D to BIMteam
 This point describes the function of exporting from the 3D as a viewer file to the platform, i.e. the area of the platform that is similar to the local WebViewer.

Export			
	Files		
		-> BIMteam (cloud upload)	¢

Viewer files can be uploaded directly from the cadwork 3D to a project on the platform. This is done via *Export -> Files... -> BIMteam (cloud upload)* 

Under *Login,* you can log in to the BIMteam server and select the project to which you want to upload data. The associated organization is now also displayed in the selection.

Configuration		Login
		-
General settings	Login Username egli@cadworkaustralasia.com	BMteam
	Authenticate Authenticated	
	Filename User meeting V30 (SP2024) Select the project on the server to upload	
	Projects Example Playground UM V30 SP2024 BIM team testing EC overlay	Organization cadwork Australasia cadwork Australasia cadwork Australasia cadwork Australasia cadwork Australasia
	Example Project	cadwork
	¢	5



Similar to the already familiar WebViewer export, you can also define a hierarchy for the exported file under *General settings*.

👫 BIMteam Upload		×
Configuration	General settings	
Login General settings	Hierarchy + Additional hierarchy - Delete previous hierarchy 1. Level Building 2. Level Storey 3. Level Group 4. Level Sub group 5. Level Name	
	Attributes   Export dimensions  Export standard attributes  Export extended attributes  Text color  Element color  User defined color	-
Load Save	OK Cancel Apply	5

Click on *BIMteam (cloud upload) to* upload the file in \*.bte format to the selected project.

-> BIMteam (cloud uploa	d) 🧬 BIMteam Upload	×
	Successfully uploaded model to project UM V30/User meeting V30 (SP2024)	
	Create Shared link Open BIMteam Open model	Close

After the upload, a new window opens in which you have the following options: You can generate a link to send directly in the dialog without having to switch to the platform. After clicking on the *Share link* button, the link will be displayed. This can be saved to the clipboard using the copy symbol and pasted into an email, for example, using <Ctrl+V>. The *Open BIMteam* button takes you to the project overview on the BIMteam platform and the *Open model* button opens the project in the viewer.



Click on the QR code to generate the corresponding QR code in the clipboard. You can insert this into any file with <Ctrl+V>.



In the BIMteam web browser view, you will find the uploaded \*.bte file in a subfolder of the project called cadwork 3D Uploads. The viewer files can also be opened in the integrated viewer here by double-clicking. The same functions are available in this viewer as in the local WebViewer files.





File versions

If the export is triggered again in the same file, the link does not change. Instead, a new version of the file is uploaded. This means that the link can always be used to open the current version of the viewer file.

The versions can be viewed and managed on the platform by right-clicking (R).



Sharing a file on the BIMteam platform

To be able to share your project data, you need to generate a share link via the context menu on the BIMteam platform. You can access this context menu by right-clicking (R) on your file. Anyone who has access to this link will be directed to the file via the viewer.

	Rename	Share link
	Share	Anyone with this link or QR code can access the "User meeting V30 (SP2024) bte"
	Model detail	
	Download	10 10 10 10 10 10 10 10 10 10 10 10 10 1
	Manage versions	
	Move to	
	Delete	
	File info	Copy QR Code Download
-		https://bimteam.cadwork.ch/#/share/65cc531e4026665118c00d82

 Via Add -> Upload file, files such as cadwork 3D or 2D files, graphics, PDF or other file formats can also be uploaded via the BIMteam web browser portal.

Many standard formats can be viewed via the integrated WebViewer. These include most graphic formats or the PDF format.

Depending on your authorization, you can view, delete, upload or download any files.

- New features since the release of version 30
  - Pin notes (Part of "Pro" Extension):

Enhance the presentation of your 3D model using pins to draw attention to specific areas. The pins can be added in five different colors, so you can differentiate between different points of interest.

## Image: Contraction 15 second 15 sec

Each pin can be given a title, an optional description and left-click (L) on *images and files* with files.



cadwork





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										<b>9</b>	Ŷ	
		tle						 				]
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•												
ļ	lma	iges ar	nd files									

By clicking on the Location button, each pin must be assigned a "Location", which is selected with a point in the 3D model and defined with Submit.



Appropriate access rights are required to create pins. Once pins have been created, you can share them with other people.



• BIMteam app

The BIMteam app for Windows is now available. Discover the extended functionality with exclusive support for the file formats \*.dwg, \*.dxf and \*.dgn. The application can be downloaded from our website <u>www.bimteam.com</u> under the menu item "Download".

• Dark and light theme for BIMteam viewer

You can customize the appearance of the platform by choosing between a light and a dark theme in your profile settings. This setting is now also applied to the BIMteam viewer.

Dark theme	Save
Viewer settings	
Left mouse button	
Rotate	<b></b>
Right mouse button Pan	-

• New grid layout with project image in the *Projects* overview In the project overview, you can choose between two different layouts using the layout button: *Grid* or *List* layout.





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To specify a project image, go to the project settings and select an image to be displayed in the grid layout.

Ŷ	BIMteam		Projects Organizations Shared	? 🍙
	UM V30	~		
Ŀ	Lastopened		•	
۲	Ac wity		Projections	
2	Te: ms			
۵	lss ies		Geolds	
Ō	Detted			
\$				
			Save Changes	
			Project Image Preview ^	
<	Collapse		Project Logo Y	

 Improved model structure and property sets for the BIMteam viewer The updated model structure and property sets result in shorter loading times and improved user-friendliness. The design has been improved so that navigation is now even more intuitive. With a right-click (R) on a hierarchy level, you can select all elements within a level and make them reappear with *Show all*.





- Dimensioning tool Normal measurement (Part of Basic extension) The dimensioning tool, which can be used to measure the normal distance between two surfaces has been added to the BIMteam viewer.



B-scene editing

With a B-scene, up to 50 models can be combined in one "scene".

B-scenes can now also be edited after initial creation. To do this, right-click (R) on the desired B-scene and select the *Edit* option in the drop-down menu to add, delete or arrange the models in a desired order.

Ŷ	BIMteam	Projects	Organizations	Shared						?	
								+ Add	<b>/</b> 🙃		i
0	Last opened		Name		Last modified	Modified	l by	Size	Version		
٢	Activity	3Dg	cadwork 3D uploads		33 minutes ago	Crispin	Egli				
2	Teams	2.6	Sample B-Scene		A seconds ano	Crispin					
۵	Issues				4 Second Sugo	Chippin	1	Edit			
Ō	Deleted						Θ	Share			
\$	Settings						₽	Move to			
							Î	Delete			
							i	File info			



Ŷ	BIMteam	Projects	Organizations Shared ?
			Australasia > UM V30 SP2024 🗧 🕴 🚯
0	Last opened		Edit B-Scene y Size Version
۲	Activity	30	Scenes are shareable setup that contains one or more models.
<b>2</b>		20	B-Scene name Sample B-Scene oti
٦			
Ō			iii 🏠 User meeting V30 (SP2024) ble 🗙
۵	Settings		
			Add model -
			Restricted extensions
			Disable measurement
			Update Cancel
<	Collapse		

• New "Issues" feature (Part of "Pro" extension)

You can now create issues within a project and discuss them with your team members. You will find the issues in the left-hand menu bar in your project. When you open it, you will get an overview of all open issues.

Ŷ	BIMteam	Projects Organizations Shared ?
	UM V30 SP2024 🗸	cadwork Australasia > UM V30 SP2024 > Issues + New Issue
C	Last opened	
۲	Activity	There's nothing here
2	Teams	
۵		
Ō	Deleted	
\$	Settings	

You can create a new issue by clicking on the *New issue* button and adding a title and an optional description.

Ŷ	BIMteam	Projects Organizations Shared	? 😱
	UM V30 SP2024		
0	Last opened	New issue	
٢	Activity	Title	
2.	Teams		
۵		Crispin Egli 🗸 19/02/2024	
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2024

Once created, you and other team members can add comments.



Once an issue has been completed, it can be closed and automatically moved to the *Closed issues.* 

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To be able to create and edit issues, you need at least Editor- permissions.

• New Shared button

The *Shared* button takes you to a list of projects. These projects are visible because someone has shared a model or a B-scene with you via a link. If you double-click on one of these projects, you can navigate to the shared model. As you have received a share link, your access to the individual models within the shared projects is restricted.





B-scenes linked in the model detail
 If you right-click (R) on a model and select *Model detail* from the drop-down menu,
 you will get a list of B-scenes that use this model.

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In our latest version, you have the option of opening the corresponding B-scene directly from the model detail. Alternatively, you can also navigate to the folder of the B-scene by clicking on the folder link.

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• Activating or deactivating viewer extensions and measurement function for certain B-scenes

When you create or edit a B-scene, you can now restrict some of the tools that appear in the Viewer toolbar. Select *Extensions* from the *Restricted Extensions* dropdown menu, the extensions you select will be disabled for that specific B-scene. You can also decide whether you want to activate or deactivate the measurement function.

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• Customize the viewer logo (Part of "Pro" extension)

To customize your project, you can integrate a logo into the BIMteam viewer. This logo is displayed in the bottom right-hand corner (see illustration) and can be configured in the project settings under *Project logo*. This function is only available if you have purchased the "Pro" extension.



Cadwork



• Improved point selection with "crosshair" function for tablets (*Part of "ToField"* extension)

We have improved point selection with a new "crosshair" feature designed specifically for tablets. This improvement provides a more accurate and user-friendly



way to select points on the screen.

 New Surveying UI (User interface): (Part of "ToField" extension) Simplified interface, optimized workflows for an improved user experience Our new user interface combines routines with optimized workflows and instant accessibility.





Introduction of Polyline: Improved stakeout functionality
 We have extended our stakeout functionality by point, line and area to include stakeout by polyline.

This function is only available in the new user interface.

 Model structure - Behaviour refined When you select an element (L), it is no longer automatically displayed in the model structure. Instead, the element and folder names have been added to the top of the properties window to provide clear navigation hints. If you want to find the element in the model structure, simply right t-click (R) on it and select *Model Structure* from the drop-down menu.



• Improved search functionality for the BIMteam viewer The search function now not only highlights the elements you are looking for, but also opens them directly.





• Multiple selection in the BIMteam viewer

With the familiar combination of <Ctrl> (<CMD> on Mac) and model selection, you can now activate multiple elements. This function is available both in the model structure and in the 3D model as well as a combination.



Selection in 3d model



Selection in model structure



## \* Appendix

- ➤ Keyboard options
- <Ctrl+Tab>Reverse activation
   If elements are already active, the function swaps the activation for all visible elements.
   All active elements are deactivated and the elements that are not active when the function is called are activated.
- ➢ Function keys F1-F12
- Activate attribute
  - Docking saw plus(see page 51)
  - Activate parts mitre off cuts only (see page 51)
  - Activate parts mitre and bevel off cuts(see page 51)
- Machine
  - Panel prefab... -> Weinmann WUP 3.5