News

CADKON+ 2022



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CADKON+ 2022 News

The main new features of the new CADKON+ 2022 are **dynamic input** and **drawing tabs**. Based on your numerous requirements, the new CADKON+ includes dynamic input, a new tool which displays object dimensions directly at the cursor while drawing basic objects, so you can change the dimensions easily during the drawing. Another new feature are drawing tabs, which enable you to swith easily between drawings, save them or close them in bulk.

Version 2022 has also several completely redesigned existing features. E.g. **hatches** have now many more options and are simplified into one dialog. The search function can now search in various object types and you can set various search parameters that were lacking in the previous versions and could not be set.

The program **speed** with PDF underlay has been improved and the **graphics** of individual objects is displayed much more accurately and is smoother.

For structural designers using CADKON+ Architecture, completely redesigned **elevation dimensions** have been prepared, which simplify and clarify their work and bring a number of new options including the possibility to define several independent base elevations and related height dimensions. It is now also possible to create a dimension with two height elevations. Another important new feature is the possibility to create a **room description by entering points**, thus eliminating the need to define a curve in advance from which the area would be taken.

CADKON+ RC now brings tools for complete **reinforcement with welded meshes**. These new tools are part of a new package and a new license **CADKON+ RC Ultimate**, which includes both tools for mesh reinforcement and other tools for bonded reinforcements.

The area of bonded reinforcement now includes **BVBS data interface** for production automation; furthermore, work with reinforcement visibility has been improved. To provide a greater support for creating shape drawings, elevation dimensioning tools have been added to CADKON+ RC.

This document serves as a detailed overview of new features, improvements and lists CADKON+ 2022 fixes of CADKON+ 2021.

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News for CADKON+ ARCHITECTURE, CADKON+ RC and CADKON+ BASIC

Drawing tabs

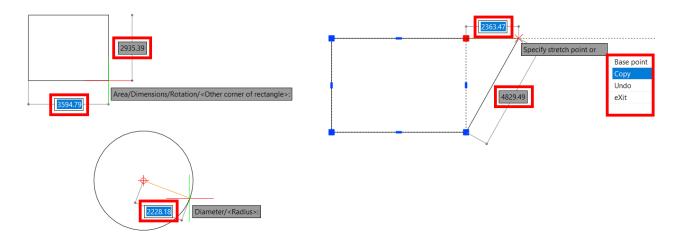
Based on your numerous requests, drawing tabs were implemented, which you can use to quickly and easily switch between open projects, save or close them in bulk or open their location on disk. You can define the appearance of the drawing tabs and their behavior in the program settings ("_CONFIG" command) on the Display tab.

			CADKON+ 2022 - [CADKON+ M	EP.dwg]	
Building construction Construction elements	Itemization and areas Cut	ts and views Settings and Control Home	Dimensions and Annotations	Blocks and Reference Tools View	/ Tables Mo
Line Polyline \bigcirc	🔊 🥼 - 👉 - nîl -			 ByLayer ByLayer ByLayer ByLayer 	 ✓ III = ■ ✓ ✓ ✓ = ✓ ✓ ✓ ✓
Draw	Modify	Layers		Properties	
CADKON+ Architecture.dwg CADKON+ MEP.dwg	× 3d Model.dwg +				
Top 🕢 2D Wireframe	New Open Save Save As Save All Close All Close All Close All Others Copy Full File Path Open File Location	-			

Pict. Drawing tabs and their right click menu options.

Dynamic input (F12)

When drawing and editing basic objects, the object dimensions and options of the given object are dynamically displayed directly next to the drawn or edited object. You can, for example, easily enter the exact height and width of a rectangle, the angle and length of a line/curve or the radius or diameter of a circle. You can switch between individual object values using the TAB key.



Pict. Illustration of dynamic input when drawing and editing basic objects.

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When editing an object using its grip points, the information about, for example, the current length is displayed directly at the cursor, or it is possible to change the length increment etc. When hovering over the object grip point, the basic object dimensions are displayed.

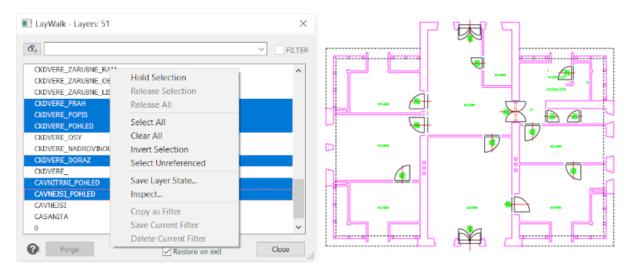
Dynamic input can be switched on/off with a new F12 shortcut key, the setting is also implemented to the program status bar. This new tool has a number of settings which can be used to define the dynamic input behavior. For example, you can choose how many input fields will the dynamic input display, whether relative or absolute coordinates will be displayed at the cursor or what color the input fields will be.

Drafting Settings	×
Snap and Grid Polar Tracking Object Sna	ps 3D Settings Dynamic Input
Enable pointer input	Enable dimension input where possible
Pointer Input	Dimension Input
10.1433 3.1733	5
Settings	Settings
Dynamic Prompts	
First point on dian	neter: 8.6787 2.3137
Tooltip	Appearance
Options	OK Cancel Help

Pict. Dynamic input settings

Layer navigation

CADKON+ 2022 includes a brand new function for layer navigation named LayWalk ("_LAYWALK" command). The command opens a dialog which lists all layers in the current drawing and you can use the selection to quickly determine which layers will be turned off or on. You can create filters for individual layers and also use these filters in another project (if it contains layers with the same name). The LayWalk can be used to purge layers, save the current layer state or check the number of layers in the current drawing.



Pict. Layer navigation dialog window and its options.

Layer navigation can also be used in layouts to quickly freeze/thaw layers in the active viewport. If you switched to a viewport, the function works only with the layers of the current viewport, either to freeze or thaw them (layers in viewports are not turned off/on as in the model space).



Hatches and gradients

The hatch function has been completely redesigned. The hatch dialog box has been simplified, all settings are implemented on a single tab. Hatches now have many more setting options, gradient patterns have been implemented and hatch boundary detection has also been improved.

Hatch and Gradient		×
	Boundaries	Islands
Hatch Gradient Type and Pattern	Add: Pick internal points	✓ Island detection
Type: Predefined ~	Add: Select entities	Island display style:
Pattern: ANSI31 V	Add. Select endles	
Swatch:	Remove boundaries	
	Recreate boundary	○ Normal
	View selections	Boundary Retention
Color: ByLayer V None V	View selections	Retain boundaries
Custom pattern: 🗸	Options	Entity type: Polyline V
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0 ~ 1 ~	Create separate hatches	Gap Tolerance
Double Related to paper space	Draw order:	Tolerance: 0 units
Spacing 1	send beHind boundary $\qquad \lor$	and and
ISO pen width 1.00 mm	Layer:	Inherit Options
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Use current origin	Transparency:	OUse source hatch origin
Use specified origin	Use Current V	
Click to set new origin	0	
Default to boundary extents		
Bottom left 🗸 🗸	Inherit properties	
Store as default origin		
Preview	OK Cancel <	

Pict. Simplified hatch dialog with new options.

New hatches have these new properties and settings:

- Gradient patterns multicolored transitions that you can use, for example, for facade details.
- Hatch background any colored background can be set for any hatch to accentuate the hatch pattern.
- Hatch origin by defining the origin, you can change the hatch alignment to any point.
- Add and remove boundary you can change existing hatch boundaries by adding or removing boundaries.
- Create new boundary if the hatch has no origin, you can recreate it and associate the hatch with this new boundary. The new boundary can be a polyline or an area.
- Separate hatches you can create a single hatch from multiple hatch objects or create multiple independent hatches.
- Hatch draw order the hatch can be drawn in the background, at the front etc.
- Layer settings hatches can be created not only to the current layer but you can also preset any layer from the drawing.



Hatch and Gradiest	×
Colors Colors	Bissediment Material Image: Add: Tools internal points Image: Bissed deletime Image: Add: Solidet entitiere Image: Bissed deletime Image: Bissed deletime Image: Bissed deletime
	Image: Descention of the second of the se
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Pict. Illustration of gradient patterns.

Find and replace

An old function in a new design. In the previous version, it was not possible to distinguish in which object type you need to find the searched term. The feature has now a number of new settings which let you specify exactly where the searched term should be found, for example if it is a table text or a block attribute text or if to search only in the layout.

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			\sim			
Location	Entity Type	Text				
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Model	Text	POHLED SEVERNÍ				
Model	Text	POHLED JIŽNÍ				ر آر
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Pict. Find and replace text dialog box.



Properties copy

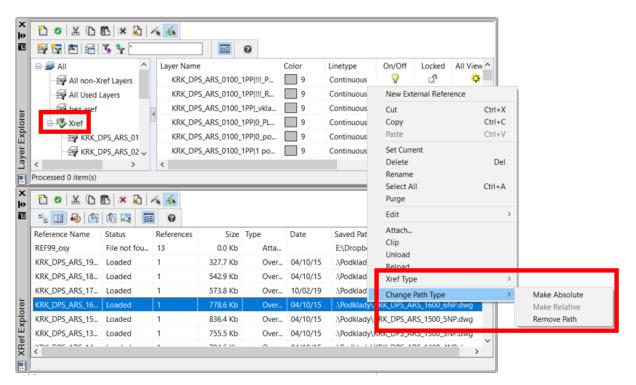
It is also a completely redesigned function. Based on your comments, following new functionalities have been implemented:

- After selecting the source object, a brush image appears at the cursor, indicating that the properties of the source object were loaded.
- After clicking on the target object, the changes will take effect immediately. It is no longer necessary to select all objects for the change and confirm the change.
- The function copies multiple properties in layouts. Between the viewports, it copies scale, layer status, layer properties, display style and now also the visibility of the UCS icon.
- Materials of 3D objects are now also copied.

Layer and Reference Manager

Smaller but very useful functionalities are implemented in the Layer manager and External reference manager. When attaching an external reference, a layer filter for the attached or underlaying Xref is automatically created in the Layer manager.

It is possible to change additionally the type of external reference from attached to underlay and vice versa in the External reference explorer. You can also change the path type (relative/absolute/none).



Pict. Automatically added layer filter to Xref in the Layer manager and new Xref settings options in the Xref Manager.

Object graphics

The new version displays object graphics with greater smoothness. Diagonal lines, arcs, circles are displayed on the monitor with greater smoothness, this new feature is controlled by the system variable "LINESMOOTHING" (value 1 = object graphics is smoother).



Event Manager

A new Event Manager tool has been implemented to the status bar. It announces all important events while working with a drawing. It draws your attention for example to missing Xrefs, missing font and shape files, reports information about changes in Xrefs, about a large



number of drawing scales or warns you about possible printing errors.

By clicking on the displayed bubble, it is possible to display the notification details and, if possible, to directly solve the error. It means that you can, for example, directly find the missing Xref and set its new path.

Time Stamp	Drawing	Туре	Details	Action
14:04:48 2021-05-14	ZTI_Krakovská.d	Missing file	E:\Dropbox\197_Krakovská 13\Podklady\	Resolve
14:04:48 2021-05-14	ZTI_Krakovská.d	Missing file	.\XREF\Stoupacky_ZTI.dwg	Resolve
how events for current dra	awing only		Delete Resolved Event Options	Resolve

Pict. Event Manager dialog with details about a given event in the drawing.

You can use the "BALOONSOUND" variable to turn off the system sound when an event is displayed or your can use the "NOTIFYMANAGER" variable to turn off this new feature completely.

Settings

Detailed settings for object selection have been implemented to the Options dialog box ("_CONFIG" command). In the previous versions, these settings could only be changed using the system variables, from the version 2022, you can change the selection behavior directly in dialog boxes.

Command Bar Command lines to 256	Object Dragging		
Use Up/Down arrows for command history navigation Graphics Window	Enable dragging when requested Enable dragging whenever possib	le	
Graphics screen color: Color Fonts	Display	Visual Effect Settings	
Sheet/Layout color: Color	Highlight item when selected	Selection Area Effect	Selection Preview Filter
Enable continuous inertial motion in real time	UCS Icon		Exclude: Objects on locked layers xrefs
Show plan view when changing UCS Updates coordinates only when selecting point	On On at UCS origin		Tables
 Coordinates always show pointer location Coordinates in polar form for distance and angle selection 	Preview Selection When a command is active When no command is active	Indicate Selection Area	Groups Multiline Text Hatches
	Visual Effect Settings	Windows selection	Windows frame
MDI Options		76,0.76 ~ Crossing selection 31.127.0 ~	255,0,255 ~ Crossing frame 0,255.0 ~
	OK Cancel	Selection area	



Customizable Open and Save dialog

Within the dialog for opening and saving a drawing, you can now add any custom folder, e.g. to the currently processed project, you can arrange the folders at will or hide any unnecessary ones.

🕝 Open Drawin	g					×
Oblast hledání:	ICAD_DWG Co	ompatibility	~ ©	⊅ 🗈 🕫		
History Dokumenty		elny 2010.dwg dklad pre profesie_ SP_rozprac 202008	Datum změny 17.09.2020 9:54 12.10.2020 11:08 12.10.2020 11:08 12.10.2020 11:08 12.10.2020 11:08	Typ AutoCAD LT v AutoCAD LT v AutoCAD LT v AutoCAD LT v AutoCAD LT v		
Oblibené Sir	Add Current Fo Add Properties Restore Standa					
Plocha	Název souboru: Soubory typu:	2020_SK_DPS.dw Standard Drawing	ile (*.dwg)		~	Otevřít Zrušit
Created: 9/1 Modified: 9/1		Preview				ł

Pict. Illustration of dialog settings options for Open and Save drawing.

Publish

List of sheets in the Publish dialog is automatically arranged according to the order of the individual layouts of the published drawings. The quality of the text and hatch output of the published file has also been improved.

Other

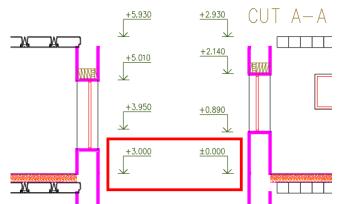
- Unified appearance of the Properties palette (CTRL+1) and Tool palette (CTRL+3) with other palettes such as Layer Explorer, Xref Explorer etc. Palettes can be docked and managed like other palettes, you can set their transparency etc.
- The zoom and panning speed in drawings with an PDF underlay has been improved. The speed of grips on PDF vectors has also been enhanced.
- Within the layouts, the object display accuracy "VIEWRES" = 1000 was reset in CADKON.DWT and Cadkon2D.dwg templates.
- Shortcut keys within the dialog Custom ("CUSTOMIZE" command) can now be redefined using the SHIFT key.
- The "_INSERT" command now remembers the file type of the inserted file.
- Enhanced mirroring of the reference with text. The text alignment is now also mirrored.
- Dynamic field can now also be redefined within the block attributes ("_ATTDEF" command).
- When starting CADKON+, the PDMODE variable is changed only if PDMODE is set to 1 (invisible point).

CADKON+ ARCHITECTURE News

Elevation dimensions

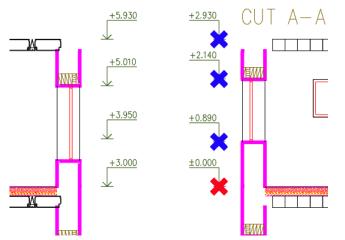
A completely new processing of elevation dimensions is owing to the great popularity of this CADKON+ feature among the users and wide range of applications across all fields. The new functionality gives users a better overview of the dimensions and, in particular, the ability to work with multiple elevation levels for both classic elevation dimensions and floor plan elevation dimensions.

 You can now define several independent bases with different height elevations in the drawing. You can thus place cuts and views at will in the drawing and define a different height elevation for each of them.



Pict. Two independent elevation basis with two different height values.

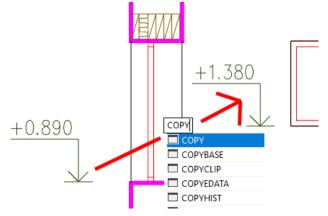
- Linking dimensions to the base the base dimension is linked to ordinary elevation dimensions. For a greater clarity, when selecting a dimension in the drawing or when creating new dimensions, the base with which the dimension is linked, is shown graphically. Bases are highlighted in red, ordinary dimensions in blue and dimensions where you manually overwrite the height value in light blue.
- For new dimensions, it is of course possible to specify to which base they should be linked.
 For already drawn dimensions you can additionally change their base and link them to another one.



Pict. Color differentiation of the base (red) and ordinary dimensions linked to it (blue).

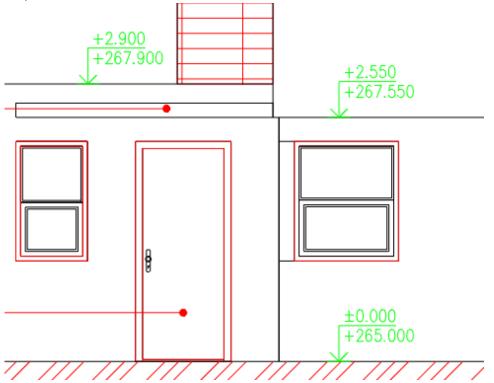


- All elevation dimensions are up to date in relation to the specified base at all times.
- Automatic update of dimensions during common CAD operations such as copy or move. This eliminates the need to run the dimension creation function repeatedly or update the dimensions when moving them.



Pict. Copied dimension is updated automatically

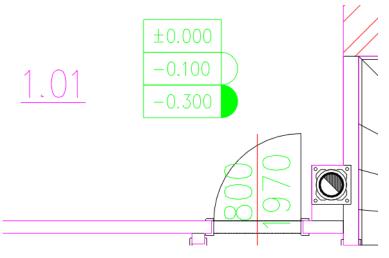
 You can now create elevation dimensions with two elevation levels. You can thus enter for example a relative and absolute height elevation at the same time (e.g. aligned to the Baltic sea).



Pict. Two different height elevations within one height dimension.

 New floor plan elevation marks with graphic markers to show multiple height elevations. They enable to show, for example, different height elevations of individual floor layers, in the floor plan etc.





Pict. Floor plan elevation marks with graphic markers to show multiple elevations.

 For floor plan elevation mark, you can select the point, by which the dimension will be inserted into the drawing.

🥞 Floor plan ele	vation mark	Х
Height value:	±0.000	~
Insert point:	Centre	\sim
Multiply functio	Centre Upper left Bottom Left Top Center Bottom center Top Right	
	Bottom right	

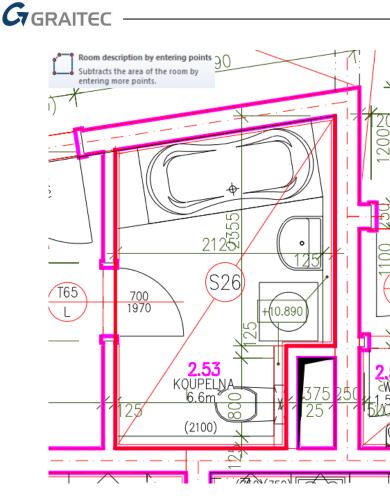
Room descriptions

Based on a number of user requests, we added the option to create room descriptions by entering points in the drawing.

°_1	Rooms description		mil	(met	📚 Preset layers 📚 Restore layers	Table of compositions
Boom description	Description by a curve Room description by selecting hatches			Surface	📚 Restore layers	Rooms table by level 🔻
by entering points	🖗 Room description by selecting hatches	editing	manager	updating	Boundary polyline by point	
	Su	rfaces ai	nd room d	lescription	S	

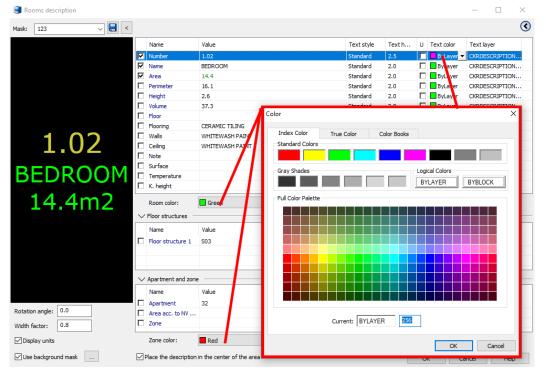
Pict. New function "Room description by entering points".

- The new function "Room description by entering points" allows you to take the room area by entering points in the drawing. This eliminates the need to draw auxiliary curve from which the room area could be taken.
- Entering by points in the drawing can also be used for additional adding or subtracting of the room area, floor structures or area according to the NV 366/2013.
- The added area is shown with a red line, subtracted with a blue line.
- After creating the description, the polyline entered by the points will be automatically drawn into a layer CKRDESCRIPTION_AREA.



Pict. Subtracting the room area in the drawing by entering points.

 Possibility to use True Color colors when specifying text color, hatch color and zone hatch color.



Pict. True Color option.



Manager of the room descriptions

 The Room description manager allows you to filter using any parameter, such as room name, structure, floor etc.

<u> </u>	e room desemptions		
Item filter:	BATHROOM	✓ Mask: 123	~
$\mathbf{\mathbb{P}}_{Number}$ ∇		🗹 Area	Perimeter
2.10	BATHROOM	4.0m2	8.8m
2.16	BATHROOM	3.9m2	8.8m
2.22	BATHROOM	4.0m2	8.8m
2.27	BATHROOM	3.9m2	8.8m
2.34	BATHROOM	4.0m2	8.8m
2.43	BATHROOM	4.0m2	8.8m
2.53	BATHROOM	6.6m2	11.1m
2.58	BATHROOM	5.8m2	10.1m
2.69	BATHROOM	6.4m2	10.2m
2.77	BATHROOM	4.0m2	8.8m

Pict. Room filtering based on the room name parameter

 Automatic crossing of out of date room table by floor. You can now be sure whether your table is up to date.

Toble	of rooms			
Number	Name	Area [m²]	Height [m]	FLOOR
1.14	HALL	7,23	2,6	WOODEN-TIMBER
1.15	BATHROOM	4,5	2,6	WOODEN-TIMBER
1.16	WC	2,02	2,6	WOODEN-TIMBER
1.17	LIVING ROOM	38,4	2,6	WOODEN-TIMBER
1.18	BEDROOM	14,28	2,6	WOODEN-TIMBER
1.19	BEDROOM	19,8	2.6	WOODEN-TIMBER
1.20	HALL	11,21	2,6	CERAMIC TILING
1.21	HALL	4,5	2,6	CERAMIC TILING
1.22	WC	1,89	2,8	CERAMIC TILING
1.23	LIVING ROOM	40,57	2,6	CERAMIC TILING
1.24	BEDROOM	12,07	2,6	CERAMIC TILING
1.25	BEDROOM	10,15	2,6	SERAMIC TILING
1.29	HALL	5,55	2,6	CERAMIC TILING
1.30	BATHROOM	4,4	2,6	CERAMIC TILING
1.31	LIVING ROOM	34,96	2,6	CERAMIC TILING
1.33	BEDROOM	14,28	2,6	CERAMIC TILING

Pict. Automatic crossing of out of date table of rooms by floor.

 In cases when you select a curve that has already been used in another room description when creating a new room description, you will now be notified and informed with which description is the curve already associated.



Link to DEKSOFT online catalog

Based on our cooperation with the company DEKPROJEKT s.r.o. (DEK a.s.) within the existing connection between CADKON with the online catalog DEKSOFT, the following news are now included in the catalog.

 As a part of importing data to CADKON+ bubbles (via the context menu), it is possible to select in the DEKSOFT online catalog which specific parameters will be imported.

Par	ameters 🔺	
	Author of scructure or system	DEK
	Building type	
	Family house, Apartment house, Office building, I	ndustrial building,
		Retail building
	Room type	Hallway
	Total Thickness	166 mm
•	U-value	0,635 W/(m ² .K)
•	DEK category Floors > Comple	te - internal floors
	Status	New
	Load bearing	No
	Fire rating	REI 60 DP1
	Product code	PD.2012A
•	Maximum surface load of the structure [kN.m ⁻²]	0 3
	Maximum concentrated imposed load [kN] 0	2

Pict. Parameter selection in the DEKSOFT online catalog for importing into bubbles.

 In the settings of DEKSOFT online katalog, there is a new option to "Save current position in the Building library when inserting", which determines whether the library should be displayed with the last used setting (filter) or with the standard default setting.

	Materials stand	Settings
ērkou, roznáš	Thermal Analys Poznámky	Log out
Settings		
Remember last position	Yes 🔵 No	
Close the plug-in after insertion	Yes 🚺 No	oznášecí betonová mazanina, izolace z

Pict. Remember last position

 New option Ignore layers allowing you to ignore layers of specified thickness when inserting into a CADKON+ drawing.

Ignore layers	Y	Insert <
	= 0 < 5 mm < 10 mm < 20 mm < 40 mm	

Pict. Setting Ignore layers in DEKSOFT online catalog.

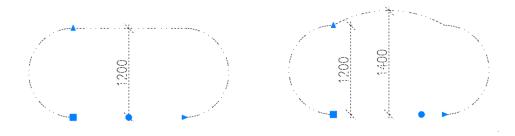


 When opening the online catalog via CADKON+, only the button Insert is displayed for the inserting. The Apply to selection button was removed.

Dynamic blocks

New dynamic blocks are included in the Library of Blocks (_CK_INSERT_M).

Symbols, Marks\Fire safety.dwg new dynamic blocks for drawing safety distances



Improved user interface

The user interface has been improved with new icons with a more modern look, which are adapted to work in 4K resolution. Some icons have been rearranged to better suit their use.

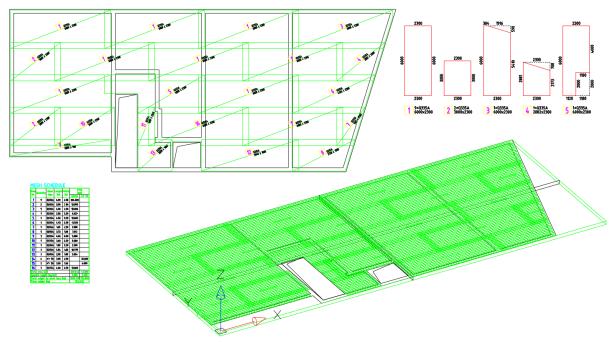
			CADKON+ 2022 - [Drawi	ina1.dwa]		
Building construction Construction	elements Itemization and areas Cuts and v	iews Settings and Control Home Dimen	sions and Annotations Blocks and Refer	5 54	odeling Print Help	
Walls Examples in the second s	Ex Delete gap II -	taircase Stairc	Celling Concrete with beams celling Cellings	Roof cut		Q Chimneys - vents Vent Vent Chimneys and vents
A 1 K B K B A 2				CADKON+ 2022 - [Dr	awing1.dwg]	
Building construction Cor	nstruction elements Itemization and a	reas Cuts and views Settings and (Control Home Dimensions	and Annotations Blocks and R	eference Tools View	Tables Modeling F
Tile by points Tiles	sulation Insulation by points Insulation Insulation	on 🛛 🗖 🖶 🕞 Wall, dv	varf wall * III concrete products composition	status *	Situation legend al meshes	➢ Fasteners ✓ Unilateral welds ▼ of offles ☆ Additional brands ▼ Library
Ch (□ K [□ S (2) +				CADKON+ 2022 - [Drawing1.dw	al	
C	ruction elements Itemization and areas	Cuts and views Settings and Control	Home Dimensions and Anno	otations Blocks and Reference	Tools View Tables	Modeling Print Help
Windows/doors bubble Bubbles	Table information Table Table information Table Insert Template edit Associative bubble table	Description	urve Label Label by selecting hatches editing manager	Surface rupdating L: Boundary polyline by p pom descriptions	Table of composition:	
C □ \ □ \ □ \ □ \ □ \ □ \ □ \ □ \ □ \ □			CADKON+ 2022 - [[Drawing1.dwg]		
Building construction Constructio	n elements Itemization and areas Cuts ar	d views Settings and Control Home D		d Reference Tools View Tables	Modeling Print Help	
tX Drawing scale change to Start Settings Start Settings	🛃 OTHERS turn off 🛛 🥵 🥵 🛃 Isola		status manager 💡 🔅 🖆 🗌 0 nyer by an object 🏶 Freeze layer názení hladin 🥊 Turn off layer Layers		e layers	v ■ Horization v ■ Hor
			CADKON+ 2022 - [Drawing1.dwg]			- t
Building construction Construction elem	ents Itemization and areas Cuts and views	Settings and Control Home Dimensions and Anno	tations Blocks and Reference Tools	View Tables Modeling Print H	felp	
Line Polyline				ByLayer • 🔡 🔫 ByLayer • 🔮 🛩 ByLayer • 🔗	Hatch to CADKON layer	Insert
Draw	Modify			Properties		Tools

Pict. New user interface.

CADKON+ RC News

Reinforcement with welded mesh - the new Ultimate packet

CADKON+ RC has been extended with tools for reinforcement with welded meshes. You can use these new tools with a new license CADKON+ RC Ultimate which includes both tools for mesh reinforcement and other tools for bonded reinforcements. The existing CADKON+ RC Premium license does not support the mesh reinforcement.



Pict. Meshes are displayed both in 2D and 3D.

Mesh reinforcement tools also include a user-extensible mesh library, option to insert a single mesh, mesh modification and trimming, mesh stretching beyond the floor plan while dimensioning their shape, as well as a report table. A wide range of mesh appearance settings is available.

The advantage of using meshes in CADKON+ RC is their full integration with existing tools for reinforcement. The meshes are automatically displayed in all construction section cuts and all information about meshes in the drawing is immediately up-to-date whenever changes are made, including labelling of mesh items with their dimensions, reports and bending details.



Pict. Tool bar with mesh reinforcement tools.



Single mesh

A new command (AbRcFabric) is designated for individual mesh insertion. You must first select a 2D cut, otherwise the insertion is entered on a 3D cut. After selecting a cut, a non-modal dialog window with mesh properties will appear, which remains on the screen until it is closed with the ENTER key.

통 Single mesh				?	×	
Item number:	1 ~	Angle	<	List		
Mesh type:	A 60		\sim	List		
Angle [°]:	90			Angl	e <	
Alignment:	2		\sim			
Number of	1					
Coverage in length / width direction 50 50						
Length [mm]:		6000		Full	~	
Width [mm]:		2400		Full	\sim	
Lenght/Width overlapping [mm]: 220 270 Default 220 270						
Place in the layer: Top \checkmark						
Reinforcement layer definition						
Layer A	ngle <	bottom			\sim	
Comment:		*no con	nmer	nt*	\sim	

Pict. Single Mesh dialog window.

The mesh can be repeatedly inserted into the drawing using a definition point. Grip points are available on a created mesh at the distance of the mesh overlap, which makes further mesh copying easier.

Mesh trimming

A new command (AbRcFabricTrim) allows you to modify the shape of selected meshes according to specified or selected boundary polyline.



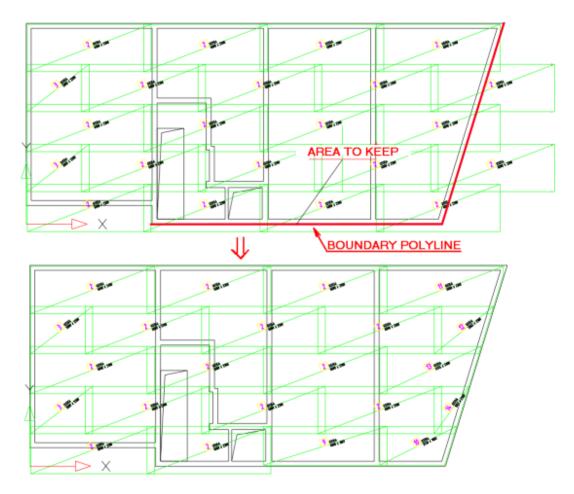
Pict. Trim meshes command icon.

The meshes are trimmed according to a selected boundary which can be defined using specified points or you can select lines defining the outline of 2D cut.



The trimming boundary can be open or closed and if it crosses the entire mesh, new meshes are automatically created.

When trimming, you can specify an offset from the specified or selected boundary, which is an advantage especially when this boundary is the construction edge.



Pict. The picture shows the original state with entered trimming boundary and the resulting trimmed mesh.

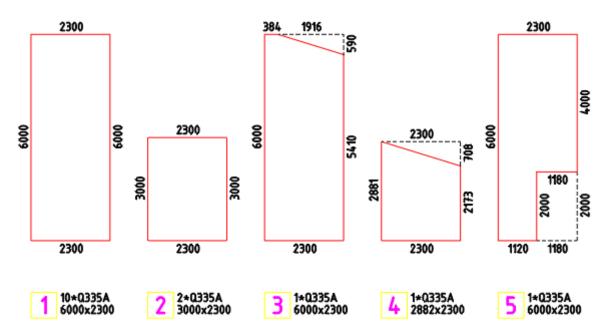
Mesh schema

A new command (AbRcFabricSchema) inserts the shape of each mesh item, including the additional description rectangle and creates dimensions of the mesh shape.



Pict. Mesh shapes command icon.





Pict. Illustration of mesh schema.

Once launched, a dialog will first appear with a choice of elements and layers which should be used for the schema.

Name of the element	Report	Number of pi	
COLUMN SLAB WALL ST-16	Yes Yes Yes	1.000 1.000 1.000	
ort by layers Count only selected la	yers Report		
	riepoit		

Pict. Dialog for entering the source of mesh schema.

Conseqently, a window for entering the schema parameters will appear.



Mesh shape extraction	? ×
Direction of meshes placement 0° 270° 	Layer detail ~ Segment dimensions
Meshes rotation O 0°	Addition to the rectangle
	Mesh label
	Meshiaber
	Label content

Pict. Dialog for entering the schema parameters.

Mesh schedule

A new command (AbRcFabricRowTable) inserts a table with list of mesh items into the drawing.



Pict. Mesh schedule command icon.

The table settings for the meshes is analogous to the table settings of rebar schedule.

MESH SCHEDULE						
ltem No.	Quantity	Mesh	Length [m]	Width [m]	Ar [m	
NO.		type	1001	run 1	0335A	KY 50
1	9	Q335A	6.00	2.30	124.200	
2	2	Q335A	3.00	2.30	13.800	
3	1	Q335A	6.00	2.30	13.800	
4	1	Q335A	2.88	2.30	6.629	
5	1	Q335A	6.00	2.30	13.800	
6	1	Q335A	4.93	2.30	11.328	
7	1	Q335A	1.69	2.30	3.880	
8	1	Q335A	3.73	1.88	7.012	
9	1	0335A	6.00	0.98	5.880	
10	1	Q335A	3.60	2.30	8.280	
11	1	Q335A	1.00	2.30	2.300	
12	1	Q335A	5.84	1.88	10.979	
13	1	Q335A	2.05	1.88	3.854	
14	6	KY 50	3.00	2.00		36.000
15	2	KY 50	3.00	1.00		6.000
16	1	Q335A	6.00	2,30	13.800	
Tota	l area (m	2]			239,542	42.000
Spec	ific weigh	5.380	5.400			
Tota			h type l	kg)	1288.735	226.800
Tota	l weight	[kg]			1515	.535

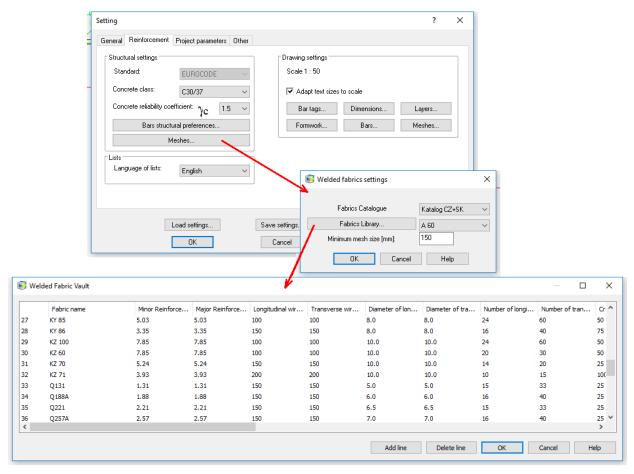
Pict. Illustration of table Mesh schedule command icon.



Mesh library

A new command (AbRcFabricCat) is intended for managing the database of mesh types.

The library can be launched from the **Settings** command.



Pict. Launching of the mesh library

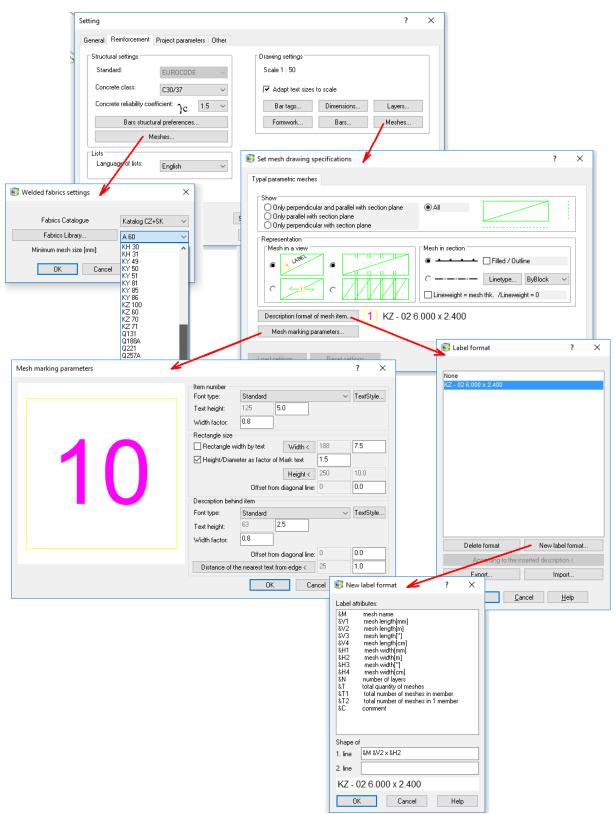
The mesh database is stored in the file **AbRcFabrics.sqlite** located in the folder C:\ProgramData\AB Studio\CadkonPlusRc_2022\en\Dat.



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Mesh settings

The "Settings" command has been expanded to allow you to set default values for mesh reinforcements.



Pict. Settings command enables default mesh values to be set.



Elevation dimensions

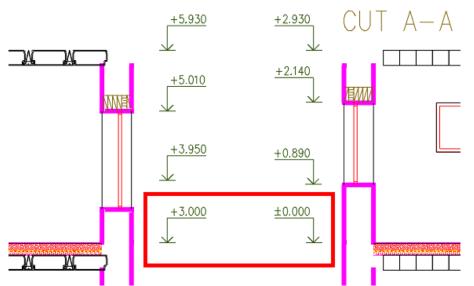
Elevation dimensioning from the ARCHITECTURE was implemented into CADKON+ RC. The new functionality gives the user a better overview of the dimensions and, in particular, the ability to work with multiple elevation levels for both classic elevation dimensions and floor plan elevation dimensions.

The elevation dimension tools are not linked to a 3D model or 3D sections of CADKON+ RC.

🕝 🗅 🔧 🗎 🗟 🖻 🕰 🖉	Ŧ								
Rebar Home Dimer	isions and Annotations	Blocks and Reference	Tools	View	Tables	Modeling	Print	Help	p
Continued dimensioning Dimension - straight * oblique *	Dimension style Use style ISO 25 Dimensions		Vertical Top ▼ ↓	▼ -00 ▼ ▼ -00 ▼	Edit reference level Level Mai	2	el marks arks paramet	ers	Quick reference

Pict. Functions for elevation dimensions are available in the Dimensions and Annotations ribbon.

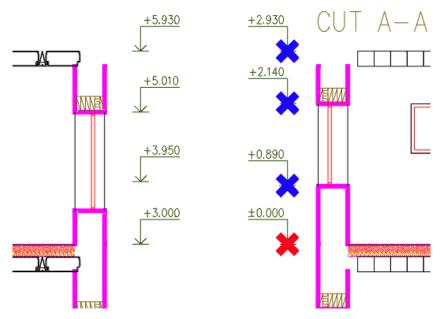
 You can now define several independent bases with different height elevations in the drawing. You can thus place cuts and views at will in the drawing and define a different height elevation for each of them.



Pict. Two independent elevation basis with two different height values.

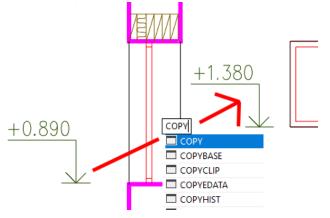
- Linking dimensions to the base the base dimension is linked to ordinary elevation dimensions. For a greater clarity, when selecting a dimension in the drawing or when creating new dimensions, the base with which the dimension is linked, is shown graphically. Bases are highlighted in red, ordinary dimensions in blue and dimensions where you manually overwrite the height value in light blue.
- For new dimensions, it is of course possible to specify to which base they should be linked.
 For already drawn dimensions you can additionally change their base and link them to another one.

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Pict. Color differentiation of the base (red) and ordinary dimensions linked to it (blue).

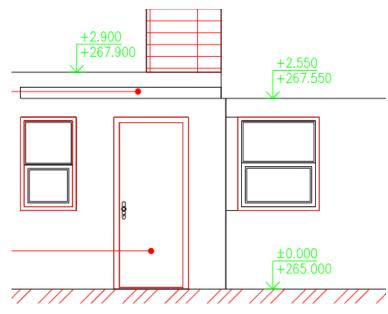
- All elevation dimensions are up to date in relation to the specified base at all times.
- Automatic update of dimensions during common CAD operations such as copy or move. This eliminates the need to run the dimension creation function repeatedly or update the dimensions when moving them.



Pict. Copied dimension is updated automatically

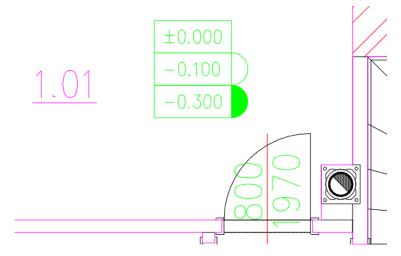
 You can now create elevation dimensions with two elevation levels. You can thus enter for example a relative and absolute height elevation at the same time (e.g. aligned to the Baltic sea).

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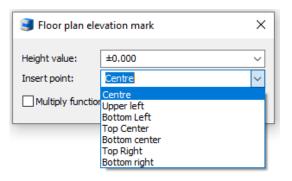
Pict. Two different height elevations within one height dimension.

 New floor plan elevation marks with graphic markers to show multiple height elevations. They enable to show, for example, different height elevations of individual floor layers, in the floor plan etc.



Pict. Floor plan elevation marks with graphic markers to show multiple elevations.

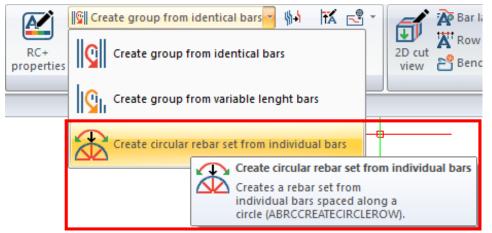
• For floor plan elevation mark, you can select the point, by which the dimension will be inserted into the drawing.





Create circular rebar set from individual bars

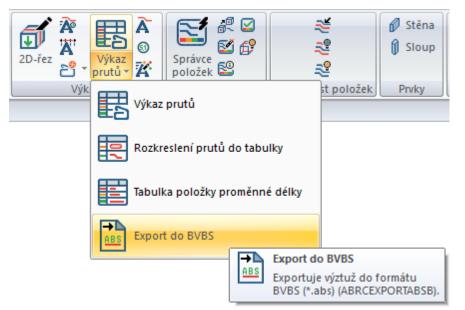
A new command (AbRcCreateCircleRow) allows you to create a row from individual bars laid out in an arc.



Pict. Create circular set command icon.

Export to BVBS

A new command allows you to export the geometry (dimensions and shape) of rebars to the BVBS format (Bundesvereinigung Bausoftware) for automatic bending machines in order to automate production. The result is an ASCII text file with a **.abs* file name extension.



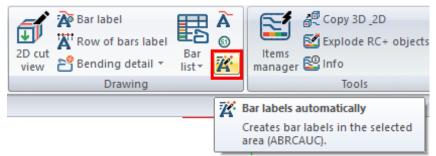
Pict. The export command for bending machines is located in the Drawing toolbar.

The program supports BF2D version, i.e. rebars bent in one plane.

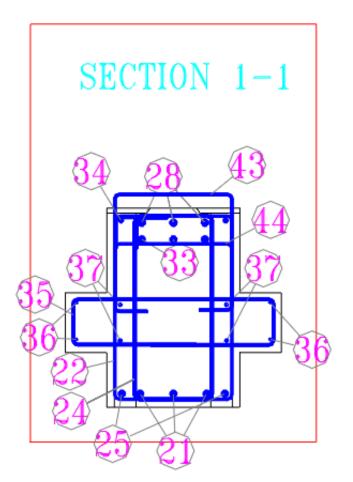


Automatic labels

A new command (AbRcAutoDesc) allows the user to label the whole 2D section or its part. CADKON first requires to enter an area which should be automatically labelled. This area can be a rectangle or a closed polygon. The specified area determines both the selection of bars for the label and specification of the location boundary for bar description which are not labelled as rows. These labels will always be located outside of this area.



Pict. Automatic bar labelling command icon is located in the Drawing toolbar.



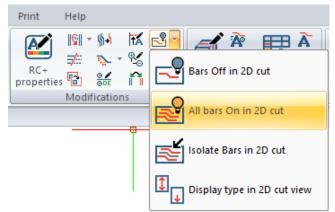
Pict. Automatic labelling is suitable especially for creating descriptions in cross sections of beams and columns.



Commands for bar and mesh visibility in 2D cuts

There are 3 commands controlling the visibility of bars or meshes in 2D cut, similar to the "Change bar/mesh visibility" function (AbRcCutModif).

- **"Turn off bars/meshes in 2D cut**" (AbRcBarCutVisibilityOff) Selected bars or meshes regardless of the item number are made invisible.
- "Turn on bars/meshes in 2D cut" (AbRcCutVisibilityOn) After selecting a 2D cut (frame or outline), all bars and meshes made invisible by command "Turn off (resp. Isolate) bars/meshes in 2D cut" will be visible again.
- "Isolate bars/meshes in 2D cut" (AbRcCutIso) Bars or meshes in cuts where the selected bar/mesh is placed are made invisible except for the selected object.
- " Display bars/meshes in 2D cut" (AbRcCutModif) Enables a change of the way the objects are represented individually compared to the 2D cut properties.

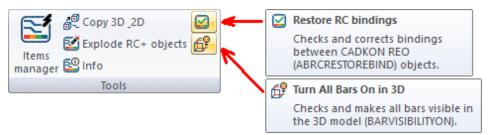


Pict. Commands for display modification are located in the Modifications toolbar

Drawing correction commands

There are commands available that we recommend to use in case of an incorrect behavior of CADKON.

- "Restore RC bindings" (AbRcRestoreBind) The command corrects the consistency of the drawing, e.g. if 2D cuts, tables etc. are no longer updated.
- **"Turn bars/meshes in 3D"** (AbRcRefVisibilityOn) The command will make all bars in 3D visible.



Pict. Commands for drawing corrections are located in the Tools toolbar.



Bar bending details - parameters of marking the radius of an arc section

The parameters of marking the radius of an arc section (text color and size, line color) are now governed by the settings for inclined segments. Previously, it was by the settings for bar segment descriptions.

		Parameters of bar bending details
		Bar line thickness Rotation of bar label • Bar diameter • Angle from axis X relative to UCS < 0.0000 • 0.0 • Angle according to bar
		Segments description setting View setting at 3D bars (absolute to the GCS) Setting of description and item layers Angle from X axis: 330.0000 Set
T	1	Automatic description of inclined segments Settings Prove Name Particle Settings
1000	700	OK Cancel
¥		R=510 Text settings Font type: RDMANS V Font
121	270	400 Text color
99		Line settings Line type: DASHED ~ Line tolor Line thickness: ByLayer ~
		OK Cancel Help

Pict. Lines and texts describing the bar arc sections can now be set in better way.

Improved exploding of RC objects

Command "Explode RC objects" now includes an automatic removal of non-graphics CADKON+ RC objects, so you can now open it outside of CADKON+ RC without the annoying message that the drawing contains PROXY objects.

Improved hiding of selected items

The "Hide selected items" command now allows you to select objects multiple times by window or crossing.

Improved user interface

The user interface has been improved with new icons with a more modern look, which are adapted to work in 4K resolution. Some icons have been rearranged to better suit their use.

(の) 12 12 12 12 12 12 12 12 12 12 12 12 12			CADKON+ 2022 - [Drawing1.dwg]
Rebar Home Dimensions and Ann	stations Blocks and Reference Tools View Tables Modeling	Print Help	
Element formwork definition Big Settings ~ \$ Additional 3D section Formwork replacement Formwork replacement	See Gard Stribution See Gard Stribution of bars into plane: See Star Shape See Creation of the item in running meters from existing bars →	Image: RC+ Image: RC+ </td <td></td>	
Formwork	Rebar	Modifications	Drawing Tools

Pict. New user interface

GGRAITEC -

Solved problems common for CADKON+ ARCHITECTURE, CADKON+ RC and CADKON+ BASIC

Plotting

- Dialog window Publish does not display the currently loaded *.dsd file with list of sheets.
- Project is not published if the list of sheets is loaded from a *.dsd file.
- PDF underlay will not print if the paper size is set to larger than A2.
- Incorrect publication of complex lines with dots if no plot style table is assigned for printing.

Hatches

- Incorrect detection of hatch boundaries around blocks.
- Non-functional variable "MIRRHATCH" (controls the hatch mirroring option).
- Specific blocks cannot be hatched by selection.
- The command letters of "_-HATCHEDIT" command do not work.

Modification

- Incorrect creation of equidistant from polylines containing an arc.
- List of groups by object lists incorrectly all groups containing the selected object.

Settings

- The command line setting variables "CMDLINEBKGCOLOR" and "CMDHISTORYBKGCOLOR" do not work.
- The tool bar does not remember the last anchored state and position.

Annotations

- After editing a specific Mtext, the position of the edited text changes.
- Incorrect display of lines in a paragraph text with specific alignment settings.
- Program failure when editing a line text in specific drawings that have TEXTSIZE set outside of the valid value.
- Program failure when editing a tolerance object (e.g. within the Reference frame).

Other

- Drawing containing a specific dynamic text field cannot be opened.
- "Can't repair database" error is displayed when attempting to repair an already opened specific drawing using "_RECOVER".
- Program failure when creating a block from the entire drawing with specific content.
- Program failure when editing a specific dimension style.
- Random program failure when reloading a PDF underlay.
- Random program failure when switching to a layout if the drawing contains a PDF underlay.
- The properties copy does not copy the material assigned to the object.
- An incorrect information notice about switching off/freezing the current layer is displayed, if layers are switched on/thawed in bulk.
- "Invalid input" message in the command line when trying to measure distance in the layout with active SNAP half.



- If the program takes up more than 4GB RAM, the PDF underlay is not displayed.
- If a language other than Czech / Slovak for non-Unicode programs is set in Windows, some CADKON+ commands report "Unknown command".
- If a language other than Czech / Slovak for non-Unicode programs is set in Windows, PDF underlay or import is not possible.

Problems solved in CADKON+ ARCHITECTURE

Blocks

- Names of blocks with names longer than 13 characters are shortened after being inserted from the library.
- For the Rafter dynamic block from the Library of Blocks/Views/Construction items/trusses_SF.dwg, the wall plate width does not correspond to the value entered in the Properties.
- For the wreath 1_cut dynamic block from the Library of Blocks/Views/Construction items/crowns_SF.dwg, not all rebars are moved during a move.
- For the střešní plášť_řez dynamic block from the Library of Blocks/Views/Construction items/roofs_SF.dwg, the roof battens on the right side of the roof are not precisely aligned.

Elevation dimensions

- Editing elevation dimensions can in specific cases delete hatches in the selection.
- Color of the elevation dimension extension line does not reflect the dimension color setting.
- Color of the floor plan dimension reference line does not reflect the dimension color setting.

Others

- When dimensioning the opening of a French window, only the window height is displayed, the height of the window sill is missing.
- Incorrect loading of floor structure when editing floor structures in specific drawings.
- The foundation strip deleting function deletes, in specific cases, hatches in the selection.
- Floor structure dialog does not display the fill color selection and edge color selection dialogs.
- When inserting a room table by floor in specific cases, the table is immediately crossed as if out of date.



Problems solved in CADKON+ RC

Installation

 The template CADKON-RC-CZ.dwt is missing after installation on a new computer (where CADKON has not yet been installed).

Element shape

- Replacing a cut does not respect BYLAYER properties if the replaced cut contains objects located in a layer with a color, linetype, line thickness assigned to it, this object lies after replacing of the cut in the correct layer but has no longer properties of this layer.
- The 2D cut outline (ABRCFORMWORKCUT2D) is created in layer 0 instead of Form_outline, when an element is created from 3D solid.

Bars and elements

- The bar selection for the TT13 stirrup definition considers bar points not at the section where they are selected, but elsewhere, which causes problems with correct entering of the stirrup shape.
- The Column function does not assume the rounding of bar segment lengths from the default setting.
- Bar laying along a curve when laying a straight bar on a section which a rotation angle 90°, the message Error in the mutual position of bar and curve will appear.

Editing

- When moving a bar of a row of variable length item (with Grips on row bars settings), the bar is moved to the opposite side than shown.
- Changing bar properties does not assume values from the default setting for bar inner round diameter.
- The Turn off selected items does not allow multiple selection.
- Program crash after stretching a 3D model.

Drawing

- The AbRcMakeCutview command in 2D does not, in specific cases, create a cut.
- Bending detail of a U-shaped bar with arms not perpendicular to the middle segment which should be dimensioned to external dimensions incorrectly dimensions 2 bar segments.
- Update of bar number of pieces in bending detail after adding a new element after adding a new element containing items, that are already in the bending detail, the number of pieces is updated only after it enters properties of some bending detail.
- Bar bending detail places a description bubble far away from the bar.
- Reference line of a variable length item description does not end on the bar.
- The Bar description (AbRcSemiAutoDesc) reads the bubble size and item number settings from the section for the variable length item and vice versa, the Variable length item bar description (AbRcVarAutoDesc) reads settings from the section for Bars.
- In a specific case of entering the Description function, AdvanceCAD crashes semiautomatically after confirming with Enter when entering the rotation angle.



- When creating a variable length item from different bars, the bar description does not describe one bar from this row.
- Description of a bar row display message "Bar row partially hidden outside of range of the 2D cut cannot be dimensioned" even when the 2D cut does not have a limited range.
- When describing a bar row (created by the Wall command), the message "Exception in jiglt" appears after selecting a bar which should remain visible.
- The Description semi-automatically with the option "Without reference line and description" will not insert anything.
- The "Isolate selected items" command should turn off bars of other items + their bending details and descriptions. However, bending details and item descriptions in bm are not turned off.
- If the Crop view option is activated, it is a problem to snap to the dashed outline lines of the 2D cut.
- Description of bar row in a cut with crop enabled: If the bar row is displayed entirely in the 2D cut with the option "Crop view" enabled, it should be possible to describe it with a Describe row of bars function. If the bars are perpendicular, it is only possible when the bar is not displayed only in the "cut" eg. as a circle. The bars displayed as a circle cannot be described straight bars with a hook cannot be described.
- A reference line ends, in one specific case, always at the end of the bar.



Technical support

In case of technical issues with CADKON+ installation or functionality, please contact us via our Helpdesk.

Signing in: <u>http://helpdesk.cadkon.eu/</u> Registration <u>http://helpdesk.cadkon.eu/Registration/Index</u> Request a forgotten password: <u>http://helpdesk.cadkon.eu/Account/ForgotPassword</u>

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