



MagiCAD for AutoCAD

Release notes for version 2021 UR-2

03/02/2021

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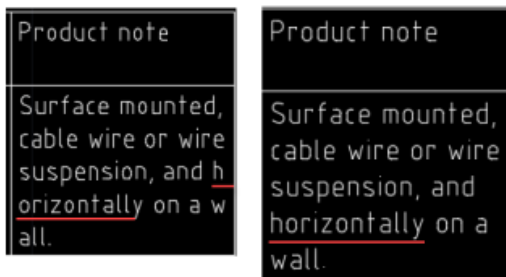
1 New features

1.1 Common

MagiCAD does now break the text by words in Legends and Reports

Long texts are now split between words to next row instead of between characters at the cell width limit.

Old vs New:



System variable improvements

The amount of system variables has been increased to 10.

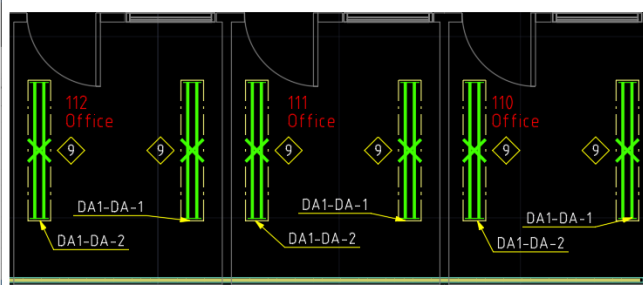
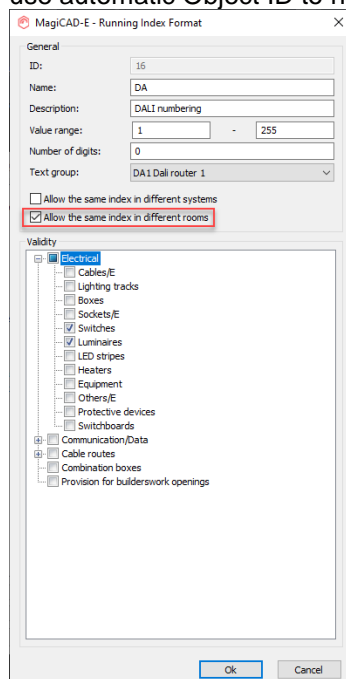
System variables have been changed to list view in MCE like they already have been in HPV.

Number of characters for each system variable have been increased to 255.

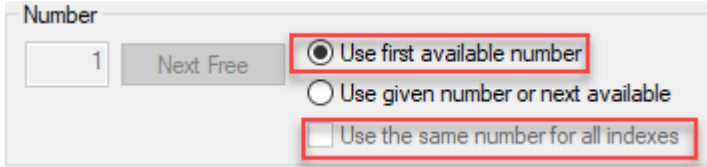
Using the same Running index in different rooms

When the drawing has been connected to a Room project where rooms have been defined, you can use "Allow the same index in different rooms" selection in Running index formats.

While numbering devices, it will start numbering from the first number in every room. It is then easy to use automatic Object ID to have individual IDs for each device with location in the ID.

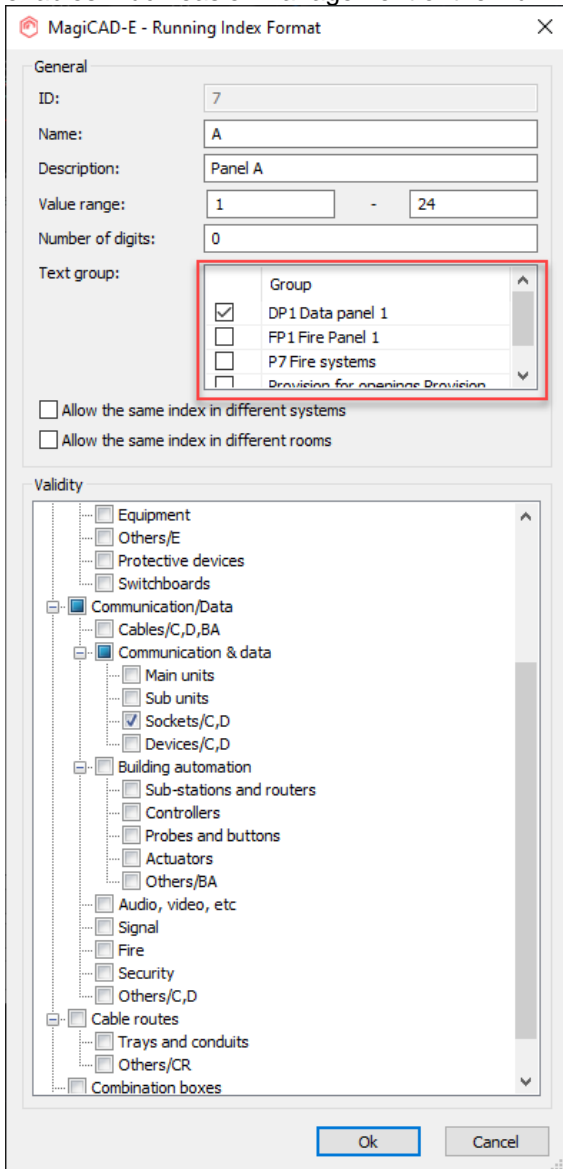


When installing Running indexes and having "Use first available number" selected, "Use same number for all indexes" button is disabled.



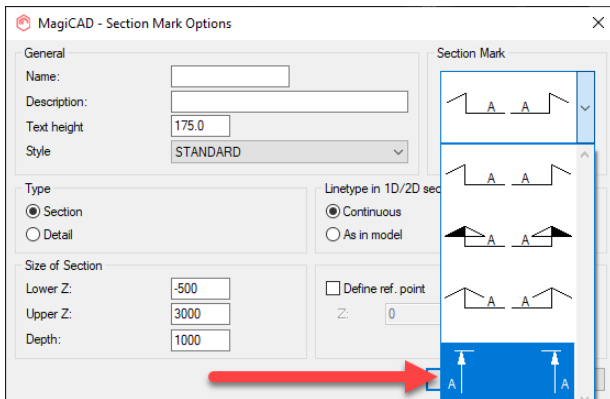
Using the same Running Index format with different Running Index groups

It is now possible to select multiple Running index groups to a single RI format. In the case of multiple data panels you can now create 1 format for each panel number and 1 group for each data panel. This enables much easier management of the Running Indexes and to make changes to running indexes.



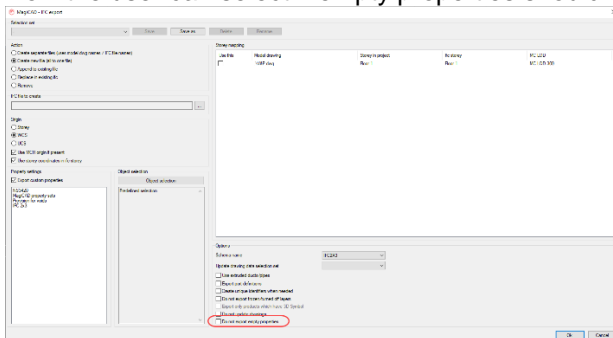
New section mark symbol for the Russian market

We added a new section mark symbol which is needed for the Russian market.



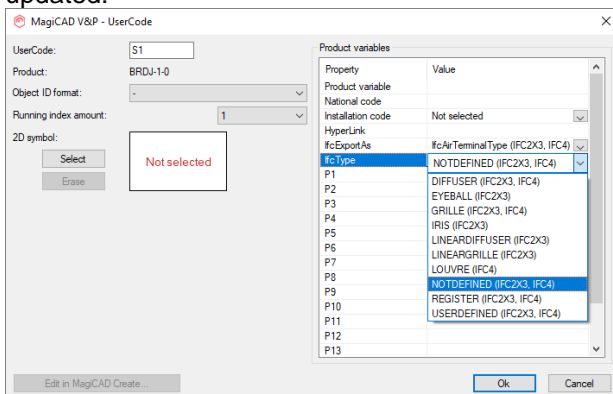
Exporting empty property sets

Now the user can select if empty properties should be exported or not

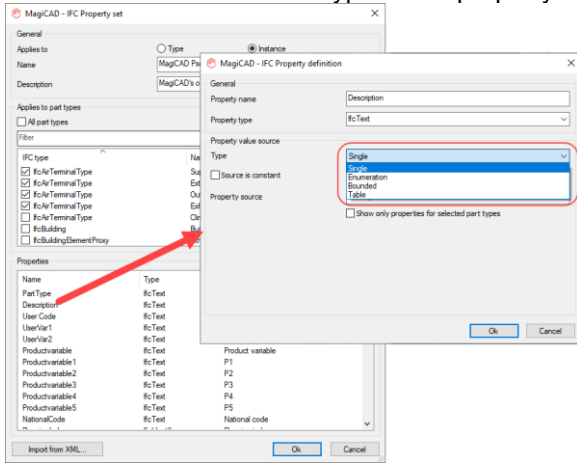


IFC sub types are now in capital letters

To better reflect the standard the IFC sub types should be written in capital letters and have now been updated:

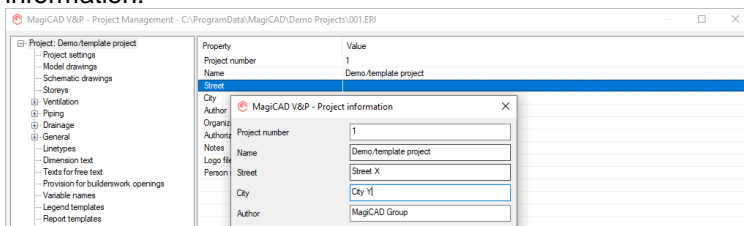


Support has been added for Enumerations, Bounded value and Table values in property sets
You can now set the value type of the property set.

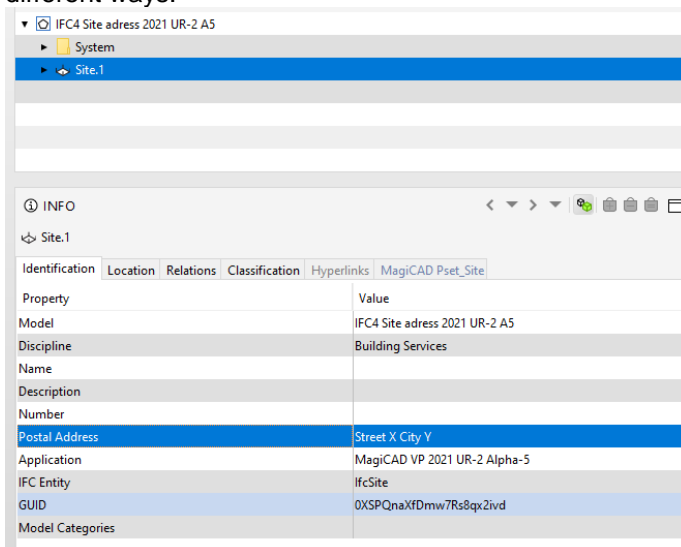


IfcSite does now also have the address information added to the IFC

In accordance with the IFC4 certification the Site should have an address that can be set and this is also added to the IFC2x3 export. This information is now written from the project to the IFC's site information:



An example of how this is shown in Solibri. Please note that different viewers show the information in different ways.

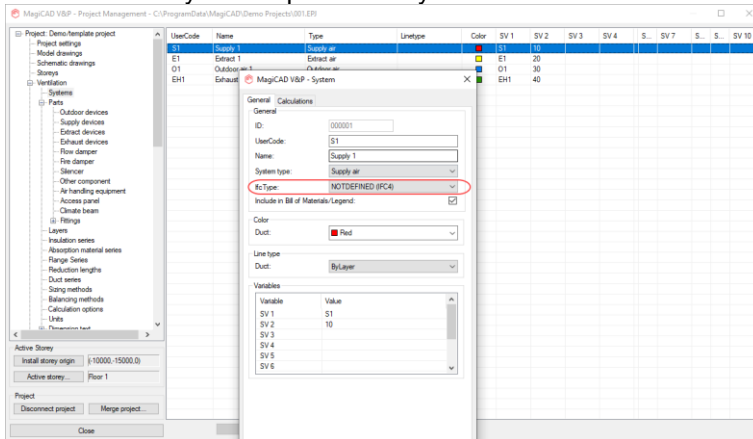


Note: The address information is the same for both the building and the site

IfcDistributionSystem is supported in IFC4

In accordance with IFC4 the system type can now be specified for the IFC export. This is only added to the IFC4 file upon export.

IfcDistributionSystem replaces IfcSystem in the IFC4 file.



IFC distribution ports information

In accordance with the IFC4 RV 1.2 standard distribution ports now have additional information:

In IFC4 the predefined type is also set for the object that the port is connected to, as well as the system's IFC type. Note that in MagiCAD for AutoCAD the port name is not set, which is demanded for full IFC4 RV 1.2 certification. This due to the ports not being editable in MagiCAD for AutoCAD, so the user can't specify a name for them.

IFC4, as shown in FZK Viewer:

Name	Value	Description
Entity Information		
Type	IfcDistributionPort	
Internal Type	IfcDistributionPort	
IFC OID	15715	
GUID	2NhZxtjDfBYwqXpgdW6XZr	
GUID (readable)	97ae3ef7-b4da-4b8b-ad21-cea9e01a18f5	
Name	?	
Description	?	
Object Type	?	
Predefined Type	DUCT	
Layer Name		
Color	R:0, G:0, B:0, A:255	Element Color
FlowDirection	SOURCE	
Contained in Building		

File header setting ExchangeRequirement has been added to IFC4 files

In accordance with the demands for the IFC4 RV 1.2 standard, this information is now added to the IFC4-file upon export.

In the IFC's header it is stated that the IFC is of the format IFC4 Reference View 1.2.

A number of missing IFC types for IFC4 RV 1.2 have been added

We added the following IFC types:

IfcCondenserType

IfcEvaporatorType

IfcAirToAirHeatRecoveryType

IfcMedicalDeviceType

IfcBoilerType

IfcBurnerType

IfcChillerType

IfcEngineType

IfcEvaporativeCoolerType

IfcTubeBundleType

IfcFlowInstrumentType

IfcCompressorType

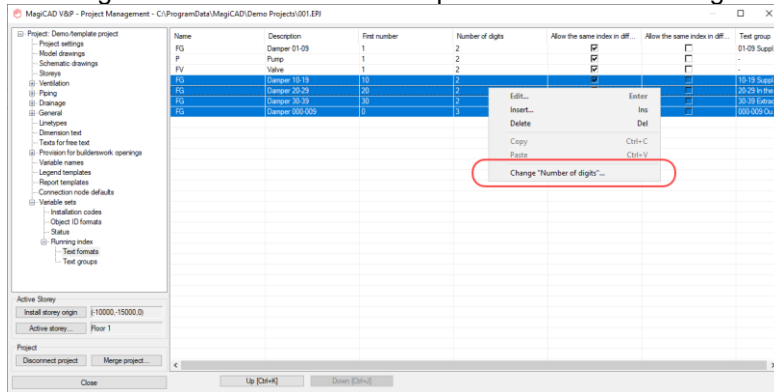
Change of cable geometry type to be suitable for IFC4 RV 1.2

Internal updates on the exported cable geometry type to be in accordance with the IFC4 standard.

1.2 Ventilation and Piping

Change column value for Running index sections

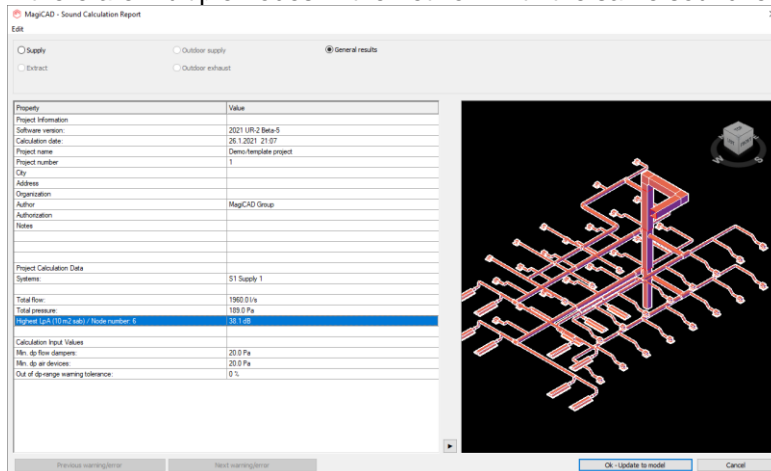
Now you can change the values of the different text formats and groups for running indexes by selecting them in the list views. Multiple values can be changed at once:



The node with the highest sound level in the network is shown in the report

The node with the highest sound level in the calculated network is shown in the report.

If there are multiple nodes in the network with the same sound level, the report shows one of these.

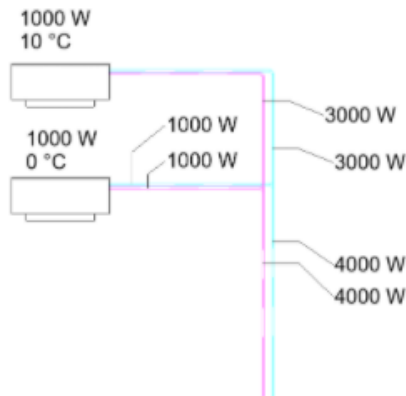


Power value for pipe segments connected to devices with dT by part and mixing units

In earlier versions of MagiCAD, for devices with the "dT by part"-option, the flow was calculated based on the user defined temperature difference, which it also is now, but the value for the power was calculated based on the flow and temperature difference defined for the system type.

In other words, the flow is calculated using different temperature difference compared to power. This was not clearly visible to the MagiCAD for AutoCAD end users, as this information isn't added to the pipes.

In MagiCAD for Revit, which uses the same system this was confusing for the end-users, where the information is added to the pipes, since they often ended up in a situation where, for example, the supply pipe of a device showed different power than the device itself:



The calculations related to this have now been updated, in both MagiCAD for AutoCAD and Revit, and we now sum up the power values defined for the devices towards the root node, which can be seen in the report:

Earlier:

MagiCAD - Hydronic Network Balancing Report

Supply

Location	Level	Node	System	Type	Series	Product	Size	L [m]	Insulation	P [W]	ρ [kg/m³]	qv [m³/h]	v [m/s]	T [°C]	Q [W]	dp/L [Pa/m]	dp [Pa]	pt [Pa]	adj	Div. %	Warnings
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.301			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	67.0	2.4	3.0	0.000	6.390				
Floor 1	8 H1	RADIATO				TRV-25-10 (L)				600	0.0050						5.674	6.390	3.5		
Floor 1	8 H1	HEATING				C11-500-1 (L)				600	0.0050						66.9		0.716		
Floor 1	H1	PIPE	Fe-35				15	2.2		4200	0.0350	0.15	67.6	68.4	25.4	0.055	6.405				
Floor 1	9 H1	BRANCH	Fe-35				15/10			4200	0.0350						0.011	6.352			
Floor 1	H1	PIPE	Fe-35				10	0.5		600	0.0050	0.03	67.1	11.8	3.0	0.001	6.341				
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.339			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	66.5	2.4	3.0	0.000	6.339				
Floor 1	10 H1	RADIATO				TRV-25-10 (L)				600	0.0050						5.568	6.339	3.5		
Floor 1	10 H1	HEATING				C11-500-1 (L)				600	0.0050						66.4		0.770		
Floor 1	H1	PIPE	Fe-35				15	2.5		3600	0.0300	0.13	67.1	77.9	19.4	0.040	6.352				
Floor 1	H1	BRANCH	Fe-35				15/10			3600	0.0300						0.008	6.304			
Floor 1	H1	PIPE	Fe-35				10	0.5		600	0.0050	0.03	66.4	11.7	3.0	0.001	6.296				
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.294			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	65.9	2.3	3.0	0.000	6.294				
Floor 1	12 H1	RADIATO				TRV-25-10 (L)				600	0.0050						5.475	6.294	3.5		
Floor 1	12 H1	HEATING				C11-500-1 (L)				600	0.0050						65.7		0.818		
Floor 1	H1	REDUCER	Fe-35				15/10			3000	0.0250	0.11					0.002	6.304			
Floor 1	H1	PIPE	Fe-35				10	2.4		3000	0.0250	0.17	66.4	58.9	44.9	0.156	6.301				
Floor 1	13 H1	BRANCH	Fe-35				10/10			3000	0.0250						0.015	6.196			
Floor 1	H1	PIPE	Fe-35				10	0.5		600	0.0050	0.03	65.9	11.6	3.0	0.001	6.181				
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.180			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	65.3	2.3	3.0	0.000	6.180				
Floor 1	14 H1	RADIATO				TRV-25-10 (L)				600	0.0050						5.253	6.179	3.6		
Floor 1	14 H1	HEATING				C11-500-1 (L)				600	0.0050						65.2		0.926		
Floor 1	H1	PIPE	Fe-35				10	2.5		2400	0.0200	0.14	65.9	61.3	30.4	0.076	6.196				
Floor 1	15 H1	BRANCH	Fe-35				10/10			2400	0.0200						0.009	6.121			

Now:

MagiCAD - Hydronic Network Balancing Report

Supply

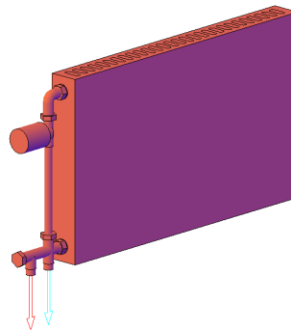
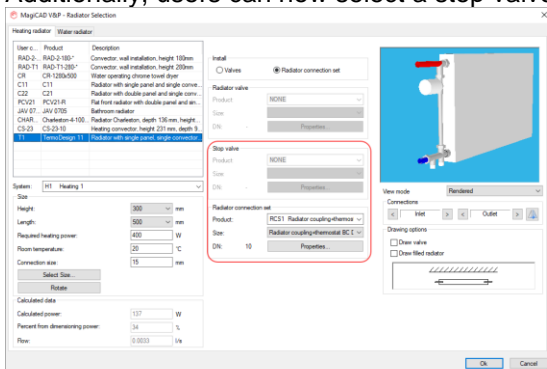
Location	Level	Node	System	Type	Series	Product	Size	L [m]	Insulation	P [W]	ρ [kg/m³]	qv [m³/h]	v [m/s]	T [°C]	Q [W]	dp/L [Pa/m]	dp [Pa]	pt [Pa]	adj	Warnings	
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.301			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	67.0	2.4	3.0	0.000	6.390				
Floor 1	8 H1	RADIATOR V				TRV-25-10-T 10 (L)				600	0.0050						5.674	6.390	3.5		
Floor 1	8 H1	HEATING R				C11-500-1200 (L)				600	0.0050						66.9		0.716		
Floor 1	H1	PIPE	Fe-35				15	2.2		4200	0.0350	0.15	67.8	68.4	25.4	0.055	6.405				
Floor 1	9 H1	BRANCH	Fe-35				15/10			4200	0.0350						0.011	6.352			
Floor 1	H1	PIPE	Fe-35				10	0.5		600	0.0050	0.03	67.1	11.8	3.0	0.001	6.341				
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.339			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	66.5	2.4	3.0	0.000	6.339				
Floor 1	10 H1	RADIATOR V				TRV-25-10-T 10 (L)				600	0.0050						5.568	6.339	3.5		
Floor 1	10 H1	HEATING R				C11-500-1200 (L)				600	0.0050						66.4		0.770		
Floor 1	H1	REDUCER	Fe-35				15/10			3600	0.0300	0.13	67.1	77.9	19.4	0.040	6.352				
Floor 1	H1	BRANCH	Fe-35				15/10			3600	0.0300						0.008	6.304			
Floor 1	H1	PIPE	Fe-35				10	0.5		600	0.0050	0.03	66.4	11.7	3.0	0.001	6.296				
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.294			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	65.9	2.3	3.0	0.000	6.294				
Floor 1	12 H1	RADIATOR V				TRV-25-10-T 10 (L)				600	0.0050						5.475	6.294	3.5		
Floor 1	12 H1	HEATING R				C11-500-1200 (L)				600	0.0050						65.7		0.818		
Floor 1	H1	REDUCER	Fe-35				15/10			3000	0.0250	0.11					0.002	6.304			
Floor 1	H1	PIPE	Fe-35				10	2.4		3000	0.0250	0.17	66.4	58.9	44.9	0.156	6.301				
Floor 1	13 H1	BRANCH	Fe-35				10/10			3000	0.0250						0.015	6.196			
Floor 1	H1	PIPE	Fe-35				10	0.5		600	0.0050	0.03	65.9	11.6	3.0	0.001	6.181				
Floor 1	H1	BEND-90	Fe-35				10			600	0.0050	0.03					0.000	6.180			
Floor 1	H1	PIPE	Fe-35				10	0.1		600	0.0050	0.03	65.3	2.3	3.0	0.000	6.180				
Floor 1	14 H1	RADIATOR V				TRV-25-10-T 10 (L)				600	0.0050						5.253	6.179	3.6		
Floor 1	14 H1	HEATING R				C11-500-1200 (L)				600	0.0050						65.2		0.926		
Floor 1	H1	PIPE	Fe-35				10	2.5		2400	0.0200	0.14	65.9	61.3	30.4	0.076	6.196				
Floor 1	15 H1	BRANCH	Fe-35				10/10			2400	0.0200						0.009	6.121			

Support for radiator connection sets

You can now install radiators to a drawing using radiator connection sets that include all the components needed for the radiator connection. Ready-to-use connection sets make it much easier to perform radiator connections and compare connection alternatives.

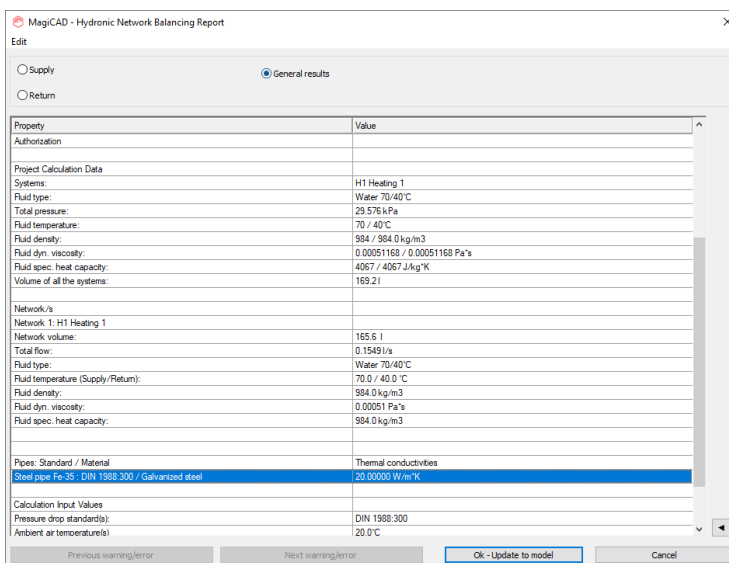
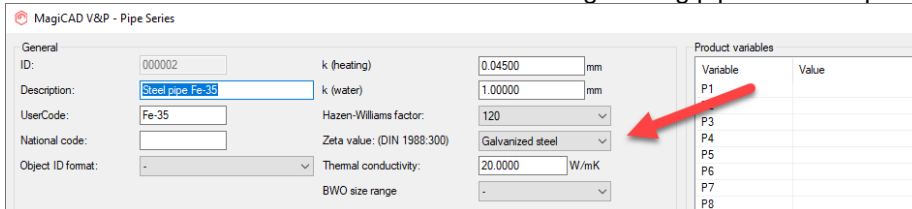
Radiator connection sets are available in the radiator installation dialog as a new product category and the function shows connection set alternatives suited for the radiator's own connectors.

Additionally, users can now select a stop valve together with a radiator valve for radiators.

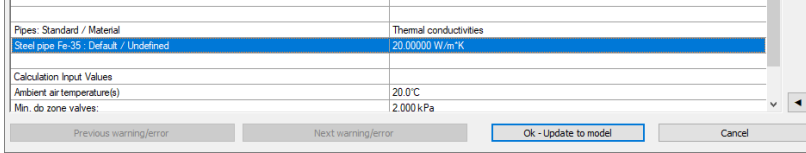


Pipe materials have been added to the domestic water report

This is now set for the domestic water and heating/cooling pipes in the reports



In case the material is "Undefined", then "Default" is shown in the report:



Ignore diversity in Heating&Cooling Sizing reports

Diversity was added in MagiCAD 2021 UR-1 for the heating, cooling and special systems, which can be set to the pipes using Change Properties.

We have now added the possibility to ignore this diversity in sizing of these systems, just like in duct systems.

You can toggle the "Ignore diversity"-checkbox on and off and then click the "Update sizing" button below, to see different sizes with and without diversity:

MagiCAD - Hydronic Network Sizing Report

Supply General results **Ignore diversity**

Update sizing

Location	Level	Node	System	Type	Series	Product	Size	Old size	L [m]	Insulation	P [W]	qv [l/s]	qv dim [l/s]	v [m/s]	T [°C]	Q [W]	dp/L [Pa/m]	Div. %	Sizing method	Warnings
Floor 1	1	H1	ROOT	NO							50000	0.4165	0.3332					80		
Floor 1	1	H1	PIPE		Fe-35		32	40	3.7		50000	0.4165	0.3332	0.31	70.0	247.9	34.6	80 (L)	Max pressu	
Floor 1	2	H1	BRANCH		Fe-35		32/20	40/20			50000	0.4165	0.3332	0.31				80		
Floor 1	1	H1	PIPE		Fe-35		20		3.7		10000	0.0833	0.0833	0.21	69.8	153.0	34.4		Max pressu	
Floor 1	3	H1	CONN.NO				20				10000	0.0833	0.0833		69.4					

MagiCAD - Hydronic Network Sizing Report

Supply General results **Ignore diversity**

Update sizing

Location	Level	Node	System	Type	Series	Product	Size	Old size	L [m]	Insulation	P [W]	qv [l/s]	qv dim [l/s]	v [m/s]	T [°C]	Q [W]	dp/L [Pa/m]	Div. %	Sizing method	Warnings
Floor 1	1	H1	ROOT	NO							50000	0.4165	0.4165							
Floor 1	1	H1	PIPE		Fe-35		40		3.7		50000	0.4165	0.4165	0.29	70.0	282.4	25.2		Max pressu	
Floor 1	2	H1	BRANCH		Fe-35		40/20				50000	0.4165	0.4165	0.29						
Floor 1	1	H1	PIPE		Fe-35		20		3.7		10000	0.0833	0.0833	0.21	69.8	152.9	34.4		Max pressu	
Floor 1	3	H1	CONN.NO				20				10000	0.0833	0.0833		69.4					

Nominal Release Temperature for sprinklers in IFC properties

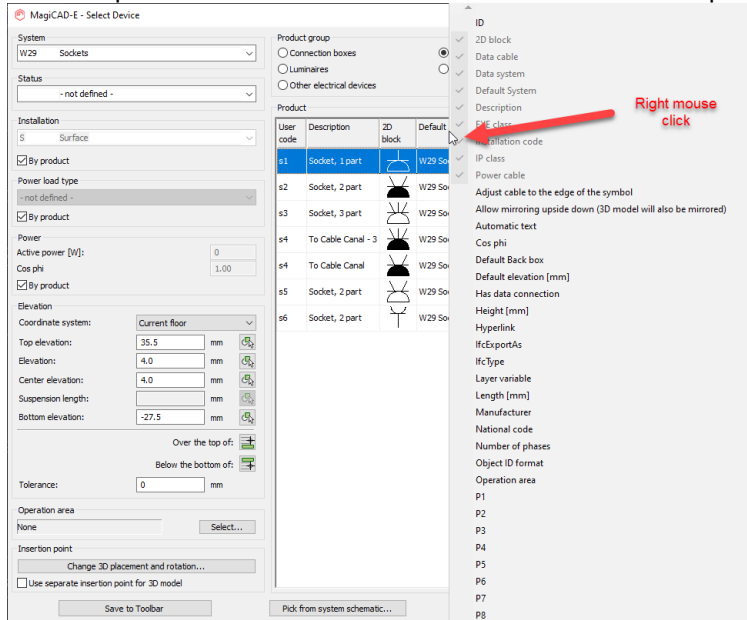
Nominal release temperature for sprinklers has been added to the IFC properties

Maximum nominal flow
Nominal flow sum
Nominal release temperature

1.3 Electrical

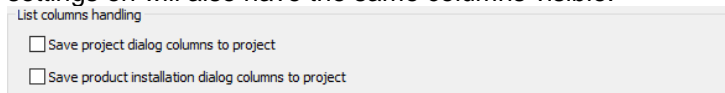
Enhanced column selection and editing functionalities

Now it is possible to select which columns are visible in the product installation dialogue.

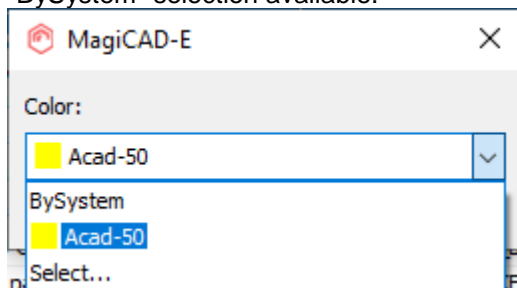


From User Preferences you can decide whether your column selections for the product installation and project dialogues are saved to your local computer or into the .MEP file.

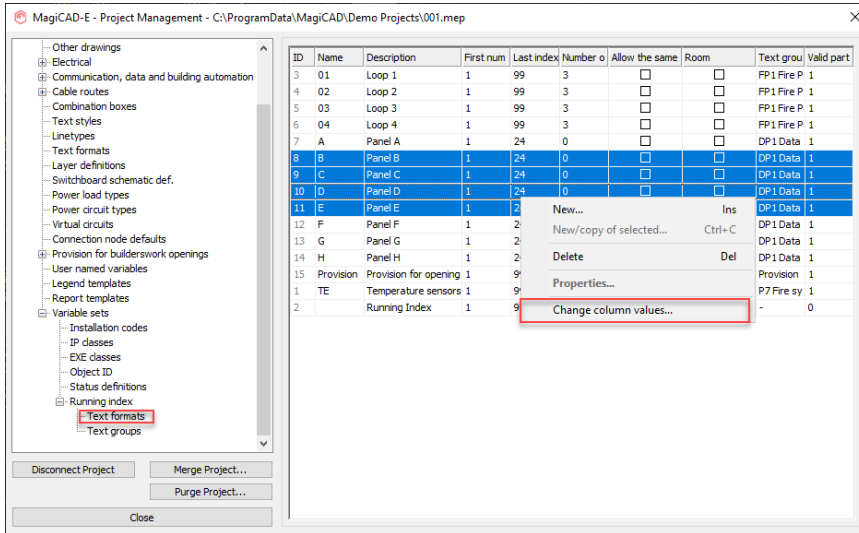
When column selections are saved to the project file, all who work with the project and have the same settings on will also have the same columns visible.



The "Change column values..." function in the project dialogue for layer colors now has the "BySystem" selection available.

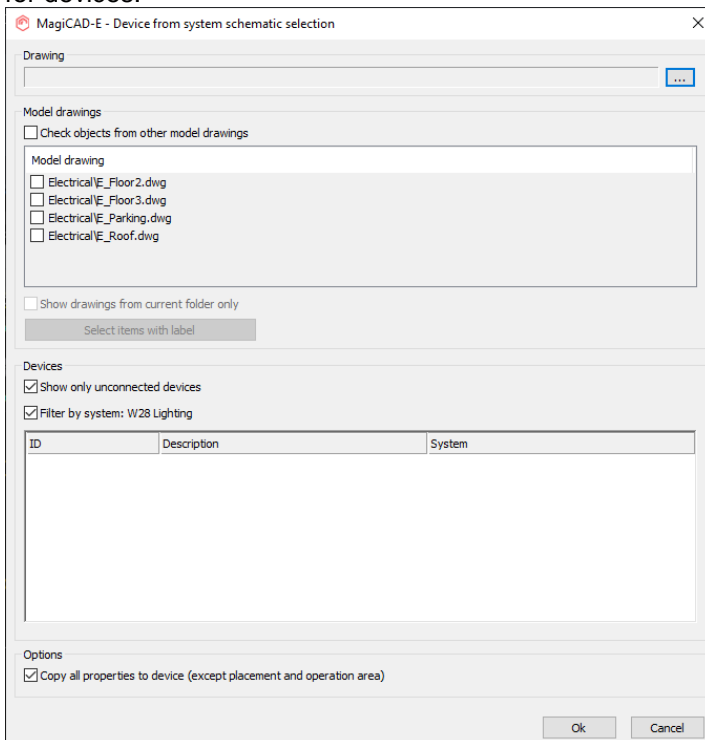


The "Change column values..." function has been added also for Running index text formats and groups.



Using Pick from plan / pick from schematic has been made faster

When clicking on a "Pick from plan" or "Pick from schematic" button, it doesn't scan other drawings while opening the dialog. It now scans only the current drawing and the separately selected drawing(s) for devices.

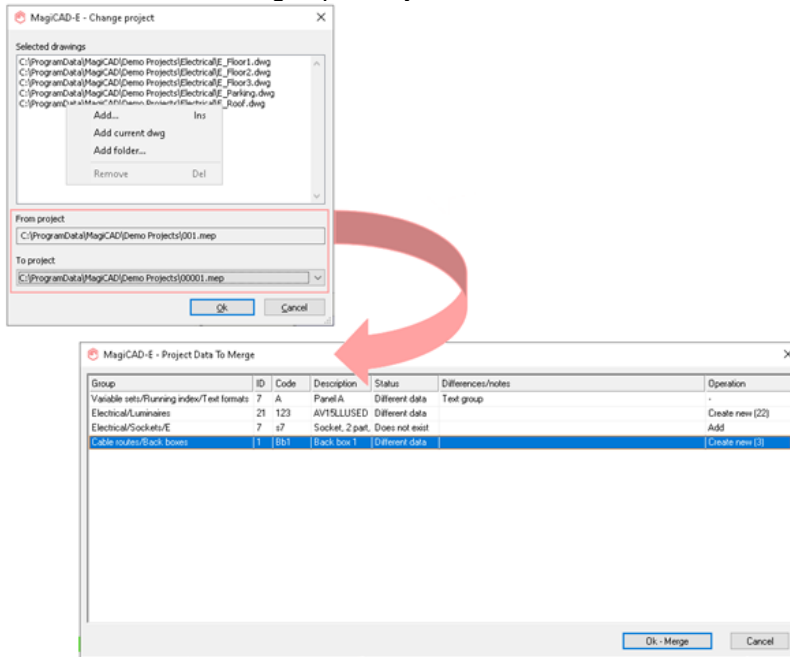


NOTE! If you don't select all affected drawings from the list, some device might seem unlinked/available even though it is linked already. Make sure you select all the relevant drawings for checking.

Batch MECHP

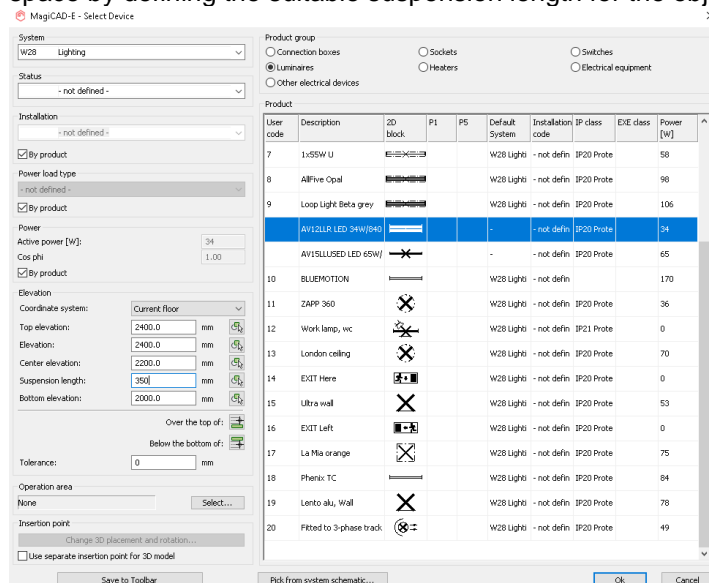
With the old MECHP command it has been possible to move a drawing from a project to another. At the same time, you have been able to merge all used products and definitions from the drawing to the target project.

Now with the new Batch MECHP function (command: `MECHPB`) you can transfer all the desired drawings at the same time to another project and perform the merge part only once instead of having to do it for each drawing separately.



Suspension length for pendant luminaires

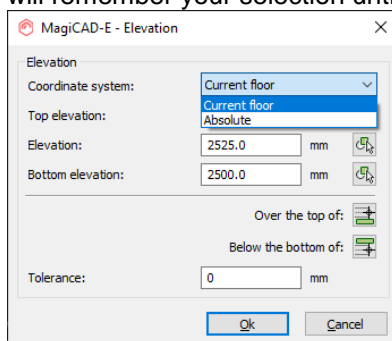
Now suspended luminaires can be installed to the ceiling and have them on the correct height in the space by defining the suitable suspension length for the object.





Absolute coordinate system

Now it is possible to change between the absolute coordinate system and the current floor coordinate system in every installation dialog (excluding switchboard installation dialog) and elevation change dialogs. When changing from a coordinate system to another, the selection affects to all functions and will remember your selection until you select another one.



Dimension text and report variable enhancements

- Dimension text "Provision for builderswork size" shows phi sign (\varnothing) in front of numbers when using it to circular openings.
- Maximum amount of characters has been increased for Prompt variables (1-3).
- New parameters (found from circuits) have been added available for dimension texts and reports:

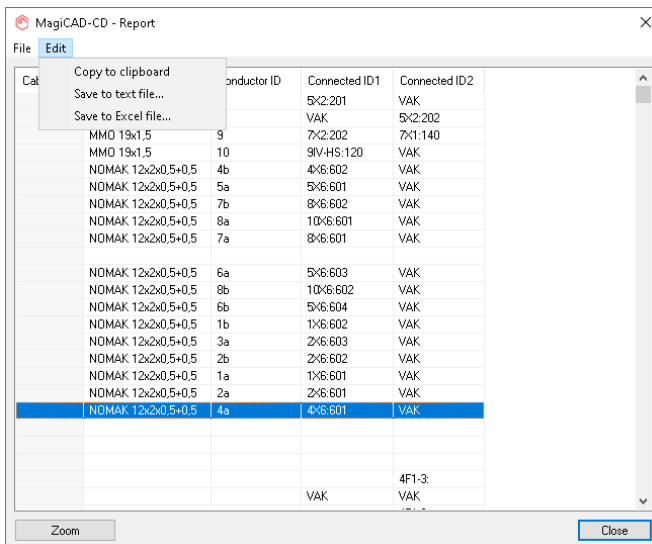
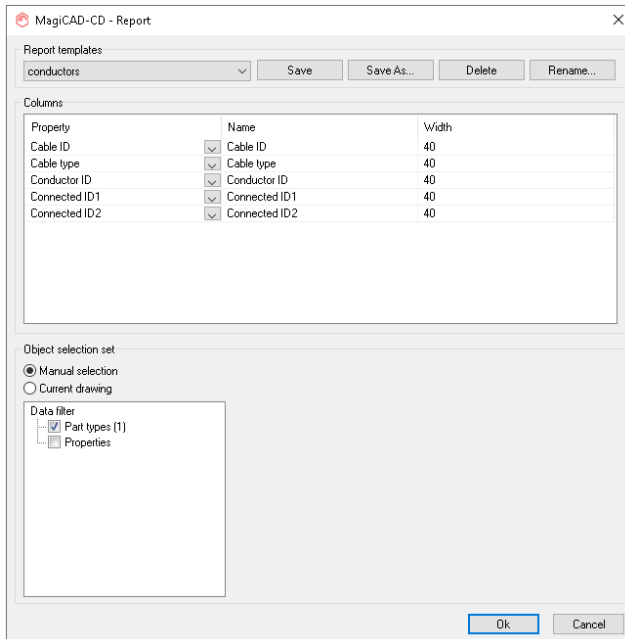
- Description 1-3
- Longest branch length
- Min L-PE current
- Overload protection
- Fault current protection
- Apparent power
- Cos phi
- Max active power
- Max apparent power
- Cos phi of max power ("Max cos (phi)")
- Diversity factor

- New parameters (found from switchboards) have been added available for dimension texts and reports:
 - Total apparent power
 - Cos phi
 - Max active power
 - Max apparent power
 - Cos phi of max power ("Max cos (phi)")

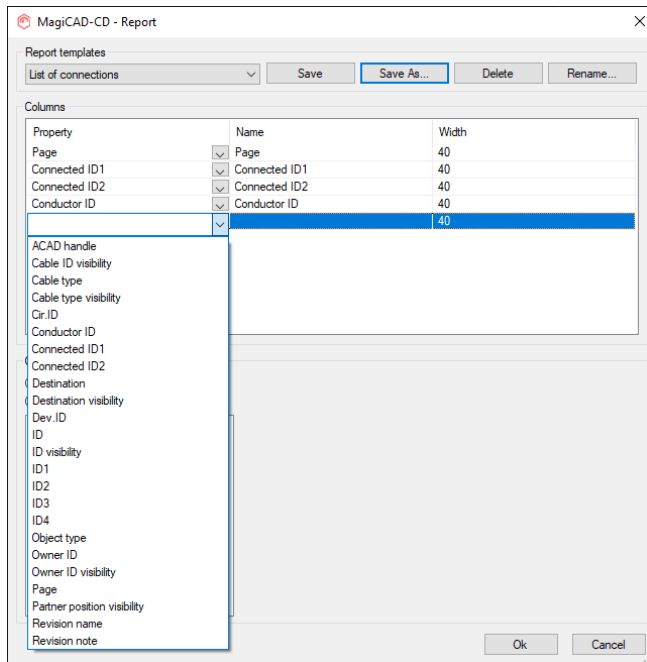
1.4 Circuit designer

Report function

A new report function has been added. From the final report dialogue you can save it as a file or copy it to the clipboard. You can also zoom to a selected item. Zooming to a conductor will zoom to the middle of the conductor.



You can define your own report templates in the drawing settings. You can use all available attributes in a report. A report template can also be copied from another existing drawing.



1.5 Room

Room selectable columns for the lists

Now you can select which columns you want to show in the project dialog for rooms and zones:

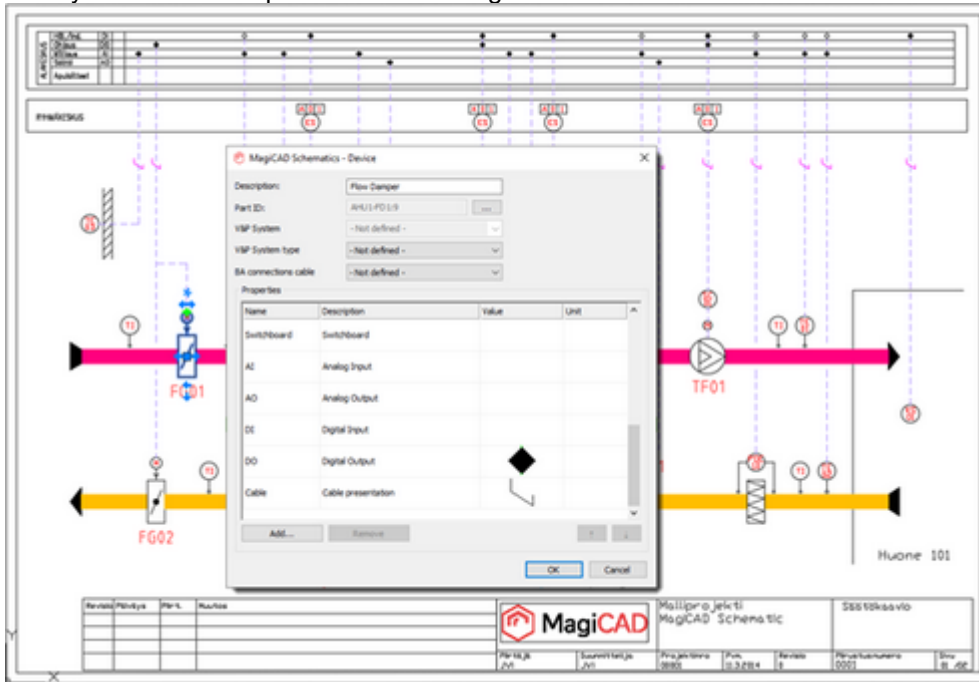
The screenshot shows the 'MagiCAD-R - Project Management' dialog box. On the left, a tree view under 'Project' shows 'Stores' expanded to 'Rooms', with '401' selected. Below this are buttons for '3D preview', 'IFC Data Exchange' (Export, Import, Update, Merge), and 'Close'. The main area is a table with columns: 'User code', 'Room name', 'Room type', and a list of selectable columns. The 'Room type' dropdown is set to 'Roof' and the 'Room name' dropdown is set to 'None'. The table shows one row for room '401' (AHU Room) with values for various parameters. A red box highlights the 'Room type' and 'Room name' dropdowns.

User code	Room name	Room type	User code	qv-pri [l/s/m2]	qv-pri [m3h/m2]	T-trans [°C]	Cooling po [W]	Cooling po [W/net m2]	Total ele [W]	E
401	AHU Room	Roof	<input checked="" type="checkbox"/> User code <input checked="" type="checkbox"/> Cooling power [W/net m2] <input checked="" type="checkbox"/> Cooling power [W] <input checked="" type="checkbox"/> E <input type="checkbox"/> Electrical average load [W/net m2] <input type="checkbox"/> Electrical fixed load [W] <input type="checkbox"/> Heat loss [W/net m2] <input type="checkbox"/> Heat loss [W] <input type="checkbox"/> Height [mm] <input type="checkbox"/> L-factor <input type="checkbox"/> Note <input type="checkbox"/> Percent <input type="checkbox"/> Primary <input type="checkbox"/> qv-exh [l/s] <input type="checkbox"/> qv-exh [m3h/m2] <input type="checkbox"/> qv-pri [l/h] <input checked="" type="checkbox"/> qv-pri [l/s/m2] <input checked="" type="checkbox"/> qv-pri [m3h/m2] <input checked="" type="checkbox"/> qv-sup [l/s] <input checked="" type="checkbox"/> qv-sup [m3h/m2] <input checked="" type="checkbox"/> Room name <input checked="" type="checkbox"/> Room type <input checked="" type="checkbox"/> Total electrical power [W] <input checked="" type="checkbox"/> T-sph [°C] <input checked="" type="checkbox"/> T-sup [°C]	2.0	7.2	-26.0	0	0.00	0	

1.6 Schematics

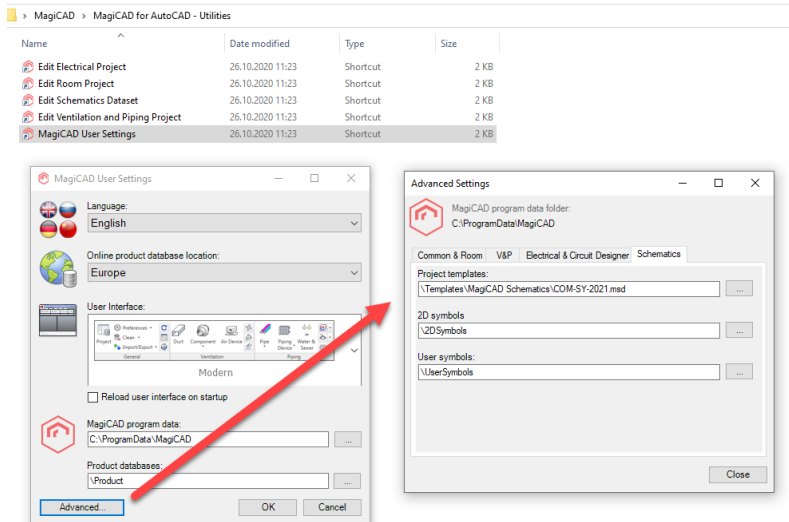
Automatic AI/AO/DI/DO for Schematic drawings

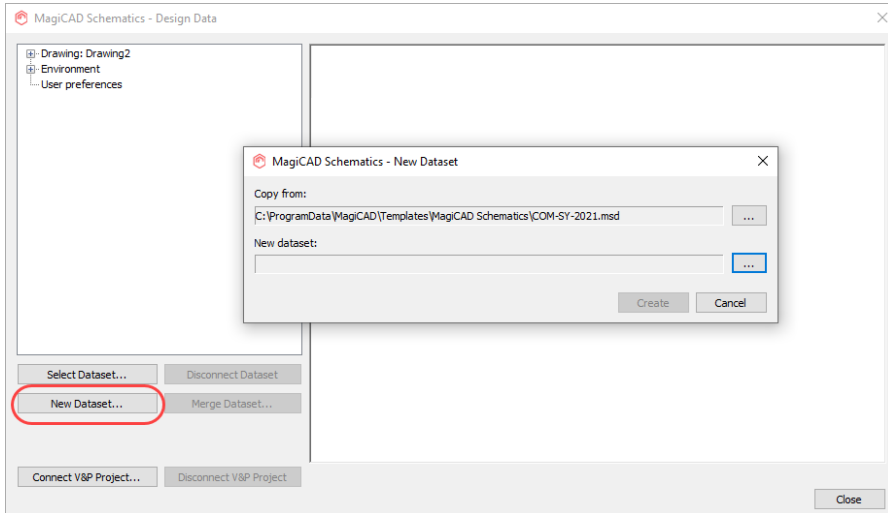
When creating automation schematic drawings, you can define which connections they are using automatically when installing a device which has automation connection symbol defined it will draw that symbol in correct place in the drawing and a wire to it.



MagiCAD Settings now has the option to set a default template path for Schematics

A path for templates can now be set in the User Settings for Schematics as well, when selecting new datasets:





2 Resolved issues

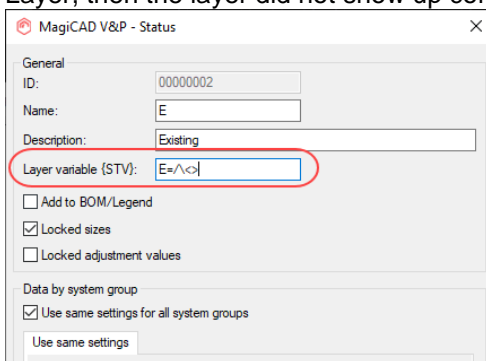
2.1 Common

Provision for voids created the voids to wrong height level

In certain special cases the provisions ended up at the wrong level when creating provisions for objects in XREFs. This has now been fixed.

Layer variable of status allowed illegal characters

It was possible to enter illegal characters to the status variable. For example if this was used in the Layer, then the layer did not show up correctly and ended up in the "MAGI_0"-layer.



MagiCAD V&P - Status

General

ID: 00000002

Name: E

Description: Existing

Layer variable (STV): E=/\<>

Add to BOM/Legend

Locked sizes

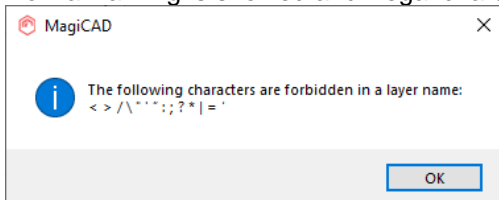
Locked adjustment values

Data by system group

Use same settings for all system groups

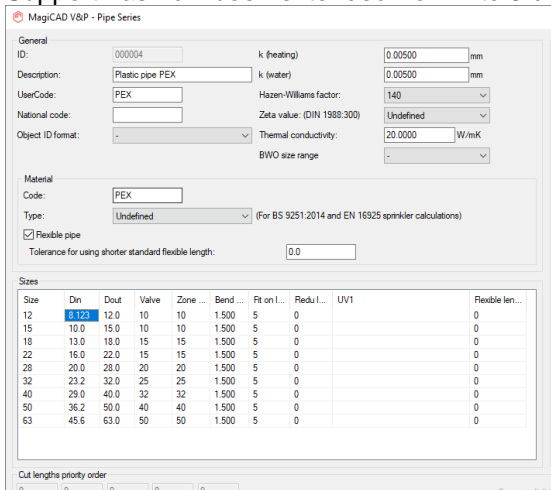
Use same settings

Now a warning is showed and illegal characters aren't allowed if you try to approve the changes:



Decimal issues in lists. The number of decimals has been extended to solve this issue

Support has now been extended from 1 to 3 decimals in lists:



MagiCAD V&P - Pipe Series

General

ID: 000004

Description: Plastic pipe PEX

UserCode: PEX

National code:

Object ID format:

Material

Code: PEX

Type: Undefined

Flexible pipe

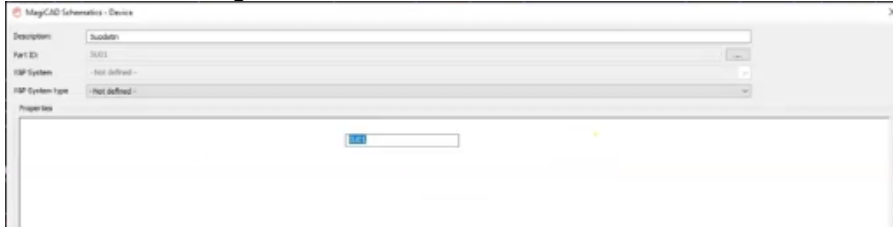
Tolerance for using shorter standard flexible length: 0.0

Size	Din	Dout	Valve	Zone	Bend	Fit on L.	Redu L.	UV1	Flexible len...
12	0.123	12.0	10	10	1,500	5	0		0
15	10.0	15.0	10	10	1,500	5	0		0
18	13.0	18.0	15	15	1,500	5	0		0
22	16.0	22.0	15	15	1,500	5	0		0
28	20.0	28.0	20	20	1,500	5	0		0
32	23.2	32.0	25	25	1,500	5	0		0
40	29.0	40.0	32	32	1,500	5	0		0
50	36.2	50.0	40	40	1,500	5	0		0
63	45.6	63.0	50	50	1,500	5	0		0

Cut lengths priority order

Dialog issue with editable fields

If the dialog had some field that you could edit and then you resized the dialog, while in editing mode, the rest of the dialog turned blank:



Now the editing action stops if the dialog is resized, or selects other windows.

The Floor offset was wrong when giving the point in absolute coordinates

Now giving the elevation in absolute coordinates doesn't depend on floor offset area.

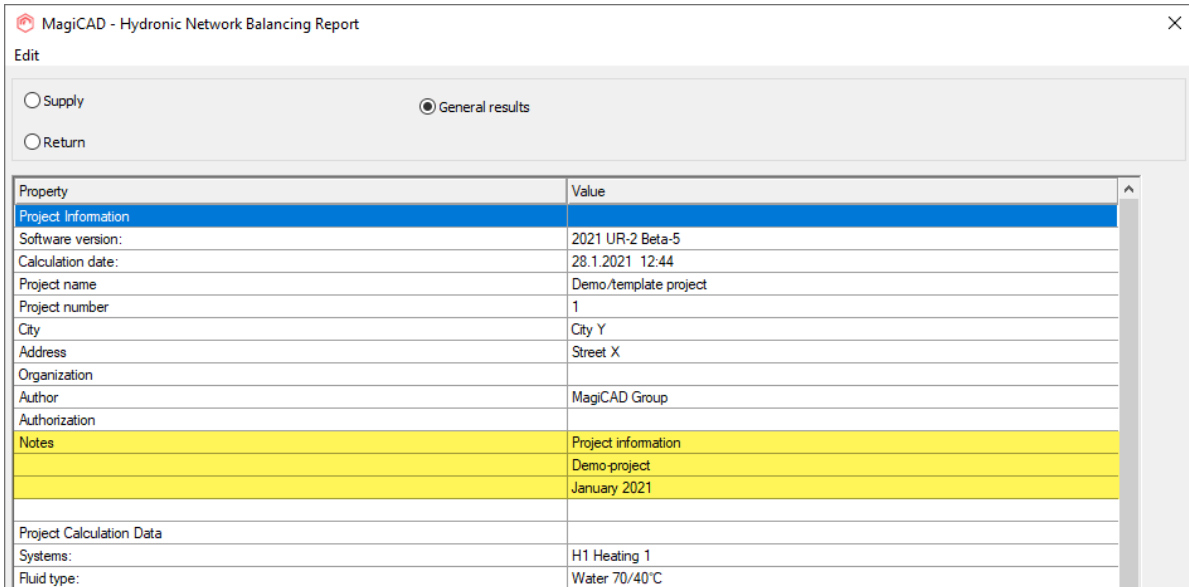
The "Change elevation" dialog uses floor offset if all selected objects have same floor offset.

2.2 Ventilaion and Piping

Text from Project Note was shown incorrectly in reports if the user had used ENTER to separate the lines

If the Notes in the project were written with enter/new line, the result was shown incorrectly in the calculation report:

Correct:



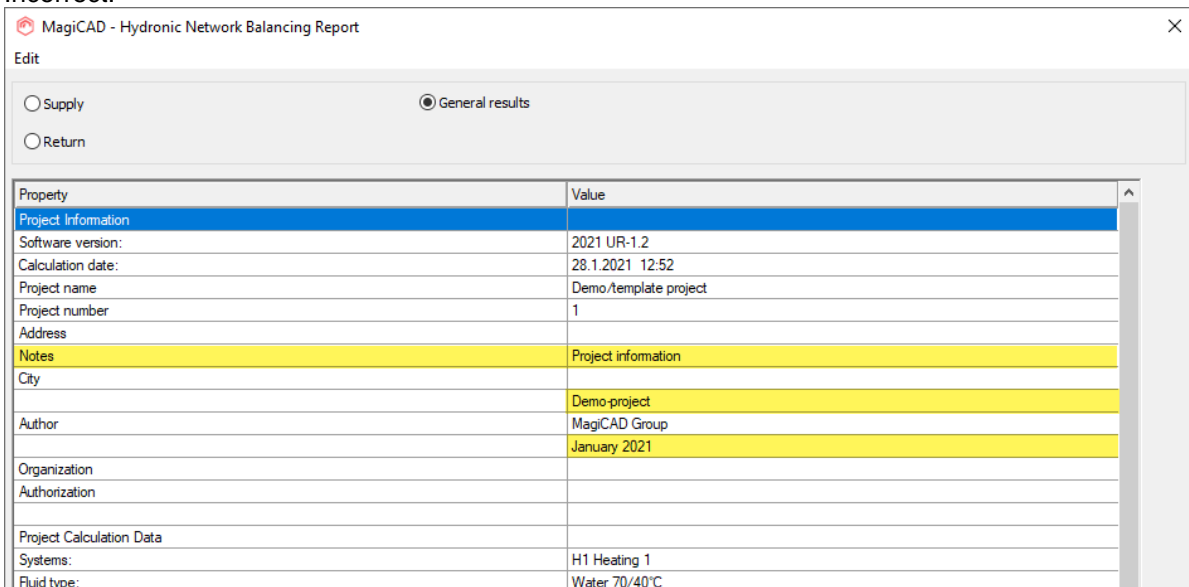
MagiCAD - Hydronic Network Balancing Report

Edit

Supply General results
 Return

Property	Value
Project Information	
Software version:	2021 UR-2 Beta-5
Calculation date:	28.1.2021 12:44
Project name	Demo/template project
Project number	1
City	City Y
Address	Street X
Organization	
Author	MagiCAD Group
Authorization	
Notes	Project information
	Demo-project
	January 2021
Project Calculation Data	
Systems:	H1 Heating 1
Fluid type:	Water 70/40°C

Incorrect:



MagiCAD - Hydronic Network Balancing Report

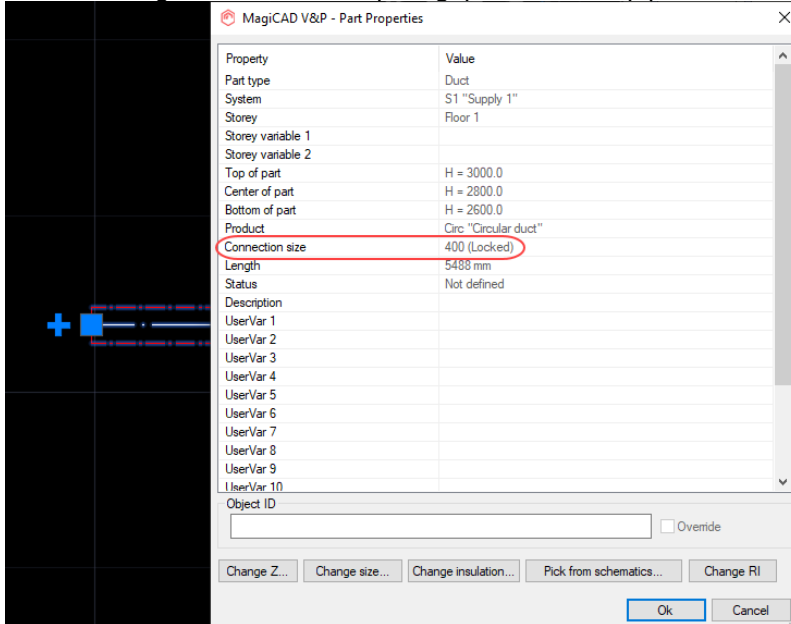
Edit

Supply General results
 Return

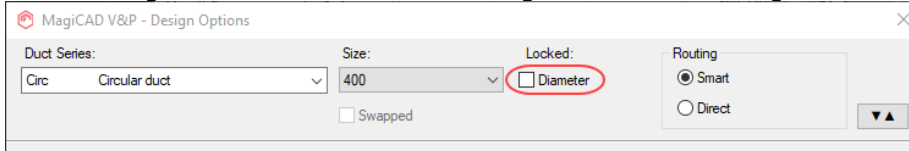
Property	Value
Project Information	
Software version:	2021 UR-1.2
Calculation date:	28.1.2021 12:52
Project name	Demo/template project
Project number	1
Address	
Notes	Project information
City	
	Demo-project
Author	MagiCAD Group
	January 2021
Organization	
Authorization	
Project Calculation Data	
Systems:	H1 Heating 1
Fluid type:	Water 70/40°C

This has now been fixed.

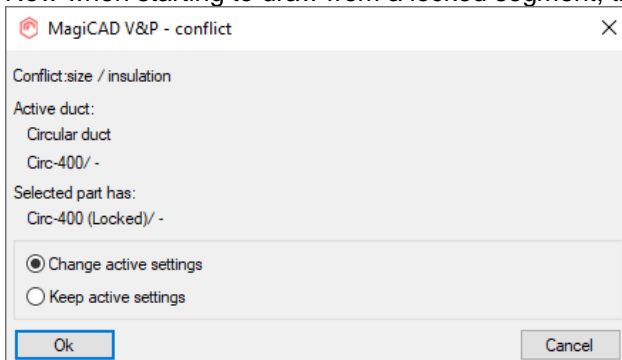
Drawing from the plus-grip of ducts and pipes, which were locked, didn't work correctly
When starting to draw from the plus-grip of a duct or pipe with a locked diameter...



...but not having had this status on in the "Design Options"-dialog, while drawing ducts or pipes, the locked diameter wasn't active when continuing to draw from the locked duct/pipe. And immediately after drawing a bend or a reducer, all the segments after the fitting were unlocked.

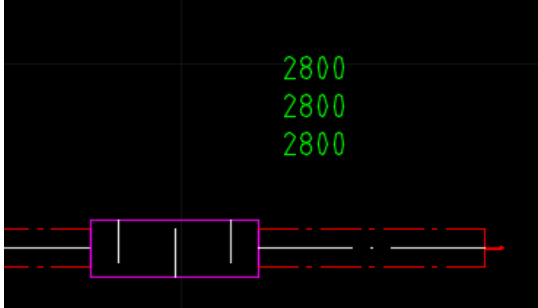


Now when starting to draw from a locked segment, the function asks if the status should be updated:



Fixed an issue related to the elevations in dimension texts for silencers

Top, mid and bottom elevations were all the same and taken from the middle-elevation of the silencer.

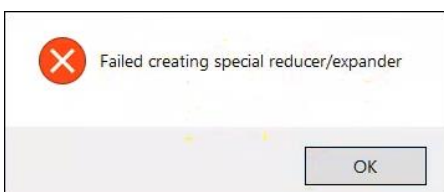
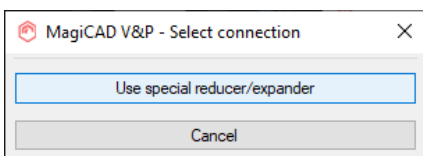
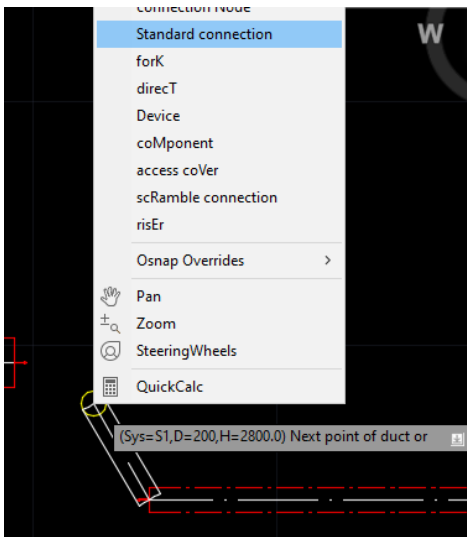


This has now been corrected and the individual offsets are shown.

Problems related to creating special reductions

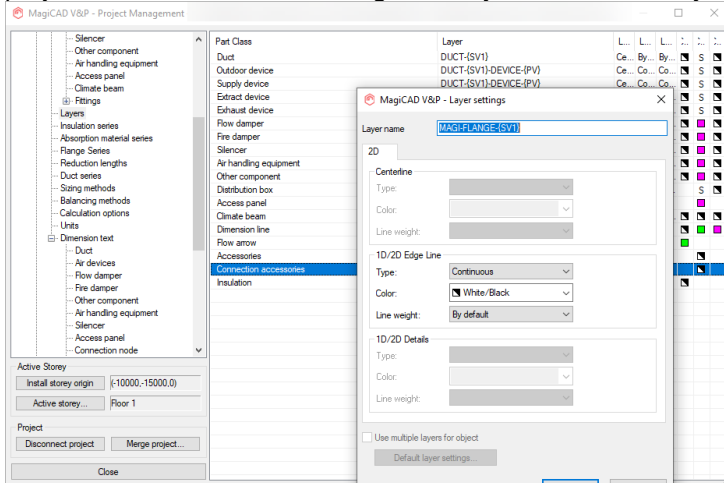
In some very special cases the function was unable to successfully create a special reduction, when choosing this option, when it should have been possible.

A message was shown stating "Failed creating special reducer/expander" and no part was drawn. This issue has now been resolved and if a reduction can be created, then it is correctly drawn.



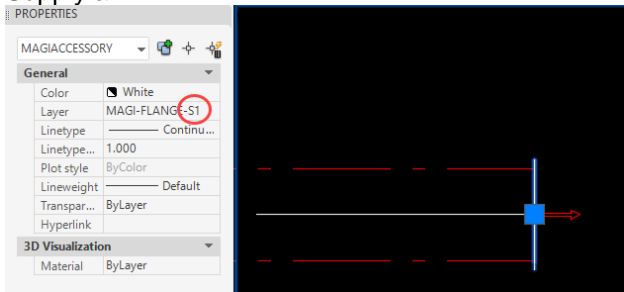
Layer issue related to flanges

If there was a duct with a flange, and the flange had a system variable set to it in the layers in the project, and the user then changed the system, then the layer variable was not updated:

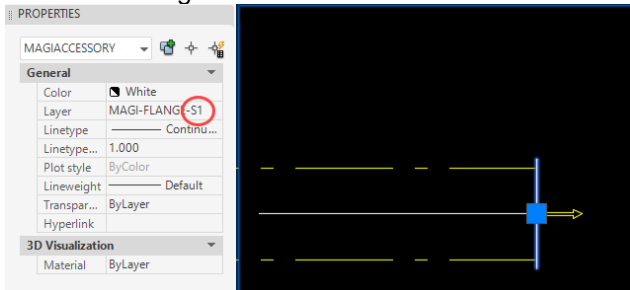


Example:

Supply air:

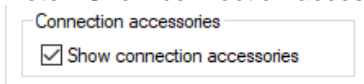


And then changed to Extract air. The variable was not updated:



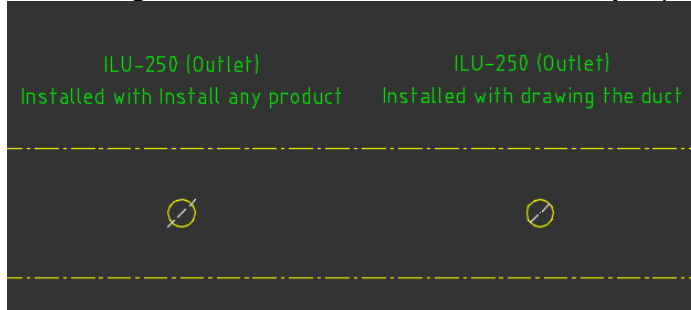
This has now been fixed and the status layer variable is also updated correctly.

Note: "Show connection accessories" should be ON in the viewport preferences to see the flanges:



Outlet symbols looked different depending which product was used

Fixed a bug where the outlets were drawn differently depending on how they were installed.



Guide vanes were handled incorrectly in calculations

Due to a function issue, the number of guided vanes was not correct at the limit, when the function changed from one size to another.

As an example:

For radius bends with vanes, in CIBSE table 4.113 it gives number of vanes for ranges of duct widths.

$N = 1$ for 400 to 800, $N = 2$ for 801 to 1600 and $N = 3$ for 1601 upwards.

For Width = 800, the bend showed 1 vane but the calculation gave $n = 2$.

Now this has been corrected so that in this case $n = 1$ is correctly selected.

Find & Replace did not work properly "Other Pipe Component"

The Find & Replace dialog reset the selection the user had done for when finding and replacing products from the "Other Pipe Component" category, so when the user, for example selected the "To"-product to something else, the selection did reset itself.

This has now been fixed and the selection the user makes stays put.

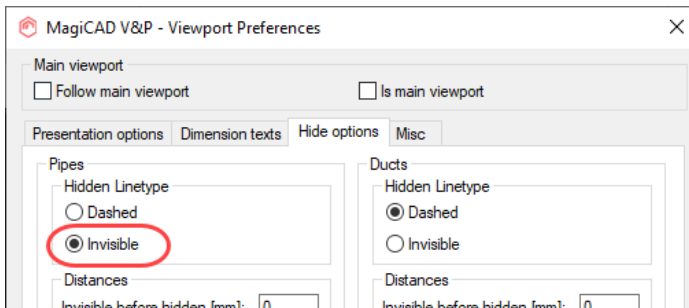
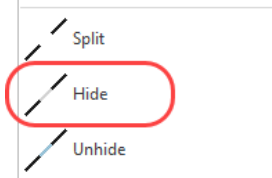
Radiator connection tool showed dots instead of pipes in some cases

In the new radiator connection tool, which is released in MagiCAD for AutoCAD 2021 UR-1, the preview sometimes showed the pipes in the preview as dots, instead of drawing the pipes. This has now been fixed.

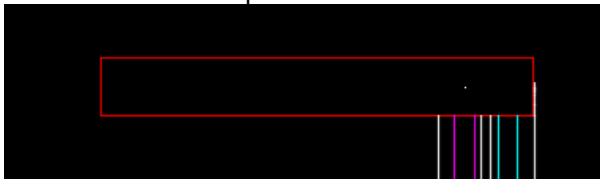


V&P Hide did not work properly with radiators

When having the Viewport option as "Hidden" and using hide on objects, the insulation on downwards going pipes wasn't properly hidden under the radiators:

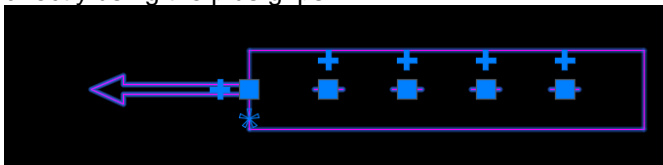


Now this has been updated and the insulation on the pipes doing down is hidden as well:



Drawing from manifold "plus grip" failed

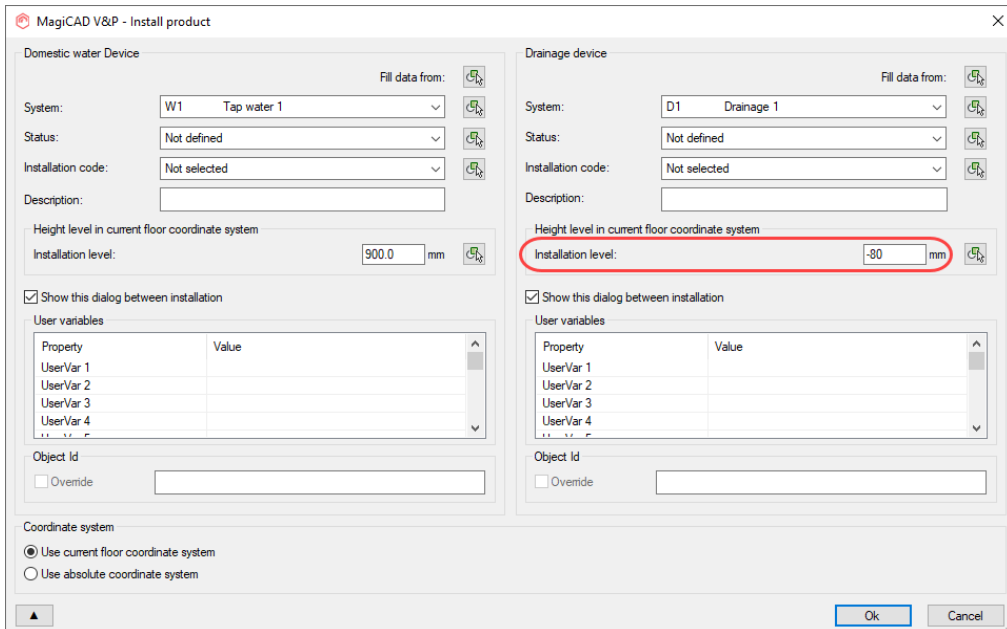
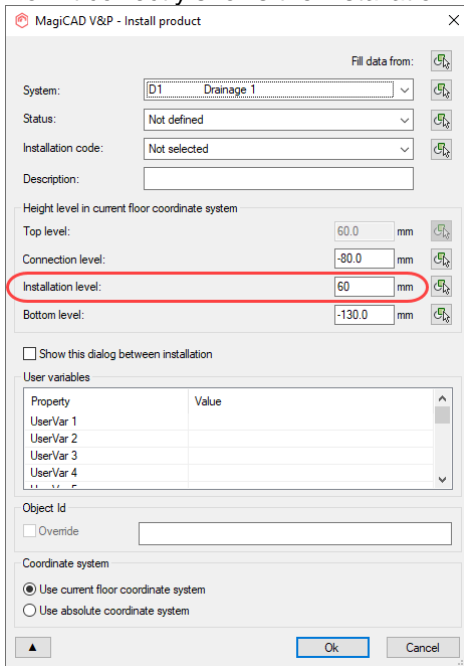
Drawing directly from the plus grips of the generic manifolds didn't work. The workaround was that the user changed the size, pipe material or insulation in the pipe drawing options dialog, before the pipe could be drawn directly using the plus grips. This has now been corrected and you can now draw directly using the plus grips.



The Installation level was shown incorrectly for drainage device when installing domestic water and drainage device

When installing a drainage device only, the installation level was correctly shown in the "Install product"-dialog, but when installing both a water device and a drainage device, then it instead showed the bottom elevation's value in the dialog, for the drainage device.

Now it correctly shows the installation level in both.



2.3 Electrical

Reports in project merge

The old "Report definitions" option has been removed from the Merge Project function. All report definitions can still be merged by using the "Report templates" option.

Fetching center offset from vertical tray returned top or bottom depending on drawn direction

Now getting center elevation from a vertical tray, returns the tray's middle point.

Conduits snapped to AutoCAD's ELEVATION when Angle to horizontal was set to Free

When a Conduit was drawn and you made a Z change with the Angle to horizontal set to Free, the Conduit would sometimes snap to AutoCAD's ELEVATION height instead.

Conduits will now go to correct elevation always.

2.4 Circuit designer

Mother part doesn't want deleted child part back

It was not possible to add a child part back to a mother part if the child part had already before been connected to the mother part but removed from it at some point.

2.5 Schematics

Schematic dataset slowness

The schematic dataset was in some cases very slow, especially large datasets, when closing the design data dialog. It took in some cases a several minutes before everything had loaded and the user could once again continue drawing.

This has now been resolved and the opening and closing the design data dialog works without delays.

3 Manufacturer Apps

MagiCAD Manufacturer Apps are additional design tools that help users to select and configure the correct products for their projects' needs. Once the desired product has been configured and/or selected, it can be inserted directly into the MagiCAD or Revit project as a BIM object with correct technical information.

Manufacturer Apps published after MagiCAD 2021 UR-1

MagiCAD Cloud Selection tools can be accessed through *MagiCAD Connect*.



SEWATEK – Service penetration units

Discipline: Piping

Product Types: Service penetration units

[About the Selection Tool](#)

- The unit related wall or floor thickness is changed.
- The unit related pipe size and/or material is changed.
- The unit related pipe assembly is changed. Pipes need to be added to or removed from the unit.

All the changes mentioned above can be simultaneous or individual and the “Edit Unit” function covers them as the changes are in the drawing.

Via IFC data transfer all the changes made to the units in the selection tool can be easily updated at the other end, such as in Tekla Structures or in other IFC compatible solutions.

Learn more about the updated Sewatek MagiCAD Cloud Selection Tool at the [on-line instructions](#)