



# MagiCAD for Revit

Release notes for version 2024

22/05/2023

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## 1 New features

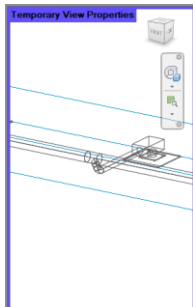
### 1.1 Common

#### Added support for Revit 2024

MagiCAD now supports Revit 2024.

#### The selected zoom is now kept in the preview windows

All MagiCAD tools that allow you to preview results before accepting them include an integrated 3D-view window. These 3D-views have now been updated so that the last used zoom and pan angles are always maintained. This helps avoid unnecessary work in reorienting the 3D-view after making changes.



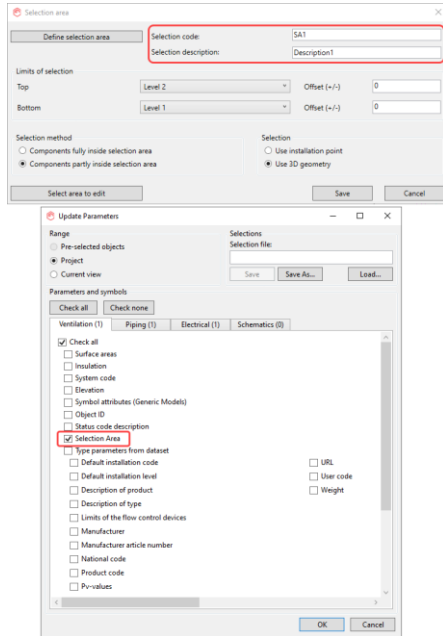
#### View manager

View manager is a new feature for creating and handling views. It offers possibility to create multiple views based on the level, view type and the scope box. Additionally, it gives quick overview of project views and view related parameter values. These parameter values can be easily modified by selecting multiple views at once and changing parameter values to all selected. It is possible to sort the list with the headers and the list will be sorted alphabetically.

View Manager													
<div> <div>Floor Plans</div> <div>Ceiling Plans</div> <div>3D Views</div> <div>Sections</div> <div>Drafting Views</div> </div> <div> <div>Create Floor Plans</div> <div>Create Dependent Views</div> <div>Add Parameter</div> <div>Find &amp; Replace</div> <div><input checked="" type="checkbox"/> Show Independent/Primary views</div> <div><input checked="" type="checkbox"/> Show Dependent views</div> </div>													
View Name	Dependency	Associated Level	Level Elevation	Type	View Template	Scope Box	Title on Sheet	Sheet Name	Sheet Number	View Scale	Discipline	Detail Level	
00_ParkingHall - Cooling - MainArea	Primary	00_ParkingHall	88250	Cooling	Model - 214 - Cooling	MainArea				50	Mechanical	Fine	
00_ParkingHall - Cooling - MainArea - SubArea1	Dependent on	00_ParkingHall	88250	Cooling	Model - 214 - Cooling	SubArea1				50	Mechanical	Fine	
00_ParkingHall - Cooling - MainArea - SubArea2	Dependent on	00_ParkingHall	88250	Cooling	Model - 214 - Cooling	SubArea2				50	Mechanical	Fine	
00_ParkingHall - Cooling - MainArea - SubArea3	Dependent on	00_ParkingHall	88250	Cooling	Model - 214 - Cooling	SubArea3				50	Mechanical	Fine	
00_ParkingHall - Heating - MainArea	Primary	00_ParkingHall	88250	Heating	Model - 211 - Heating	MainArea				50	Mechanical	Fine	
00_ParkingHall - Heating - MainArea - SubArea1	Dependent on	00_ParkingHall	88250	Heating	Model - 211 - Heating	SubArea1				50	Mechanical	Fine	
00_ParkingHall - Heating - MainArea - SubArea2	Dependent on	00_ParkingHall	88250	Heating	Model - 211 - Heating	SubArea2				50	Mechanical	Fine	
00_ParkingHall - Heating - MainArea - SubArea3	Dependent on	00_ParkingHall	88250	Heating	Model - 211 - Heating	SubArea3				50	Mechanical	Fine	
00_ParkingHall - Ventilation - MainArea	Primary	00_ParkingHall	88250	Ventilation	Model - 213 - Ventilation	MainArea				50	Mechanical	Fine	
00_ParkingHall - Ventilation - MainArea - SubArea1	Dependent on	00_ParkingHall	88250	Ventilation	Model - 213 - Ventilation	SubArea1				50	Mechanical	Fine	
00_ParkingHall - Ventilation - MainArea - SubArea2	Dependent on	00_ParkingHall	88250	Ventilation	Model - 213 - Ventilation	SubArea2				50	Mechanical	Fine	
00_ParkingHall - Ventilation - MainArea - SubArea3	Dependent on	00_ParkingHall	88250	Ventilation	Model - 213 - Ventilation	SubArea3				50	Mechanical	Fine	
01_Level - Cooling - MainArea	Primary	01_Level	92750	Cooling	Model - 214 - Cooling	MainArea				50	Mechanical	Fine	
01_Level - Cooling - MainArea - SubArea1	Dependent on	01_Level	92750	Cooling	Model - 214 - Cooling	SubArea1				50	Mechanical	Fine	
01_Level - Cooling - MainArea - SubArea2	Dependent on	01_Level	92750	Cooling	Model - 214 - Cooling	SubArea2				50	Mechanical	Fine	
01_Level - Cooling - MainArea - SubArea3	Dependent on	01_Level	92750	Cooling	Model - 214 - Cooling	SubArea3				50	Mechanical	Fine	
01_Level - Heating - MainArea	Primary	01_Level	92750	Heating	Model - 211 - Heating	MainArea				50	Mechanical	Fine	

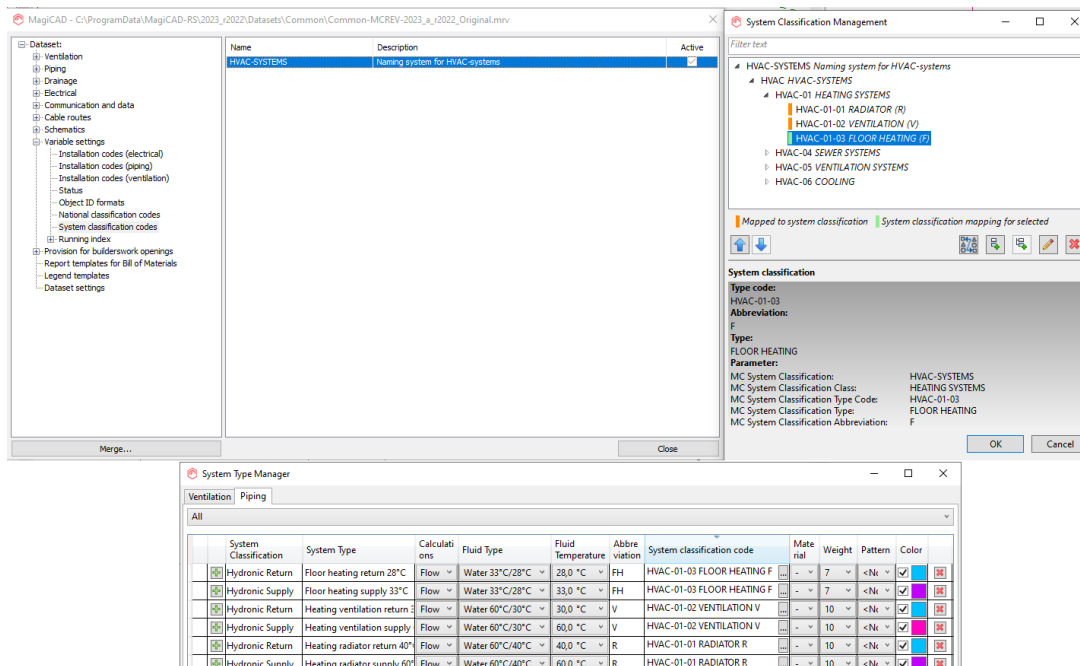
## Selection area - improvement

It is now possible to write selection area code information to the object parameter to indicate in which area it belongs. To write selection area code to selection area parameter, use Update Parameters and select "Selection Area" from the list.



## System Classification codes

It is now possible to create system classification code structure and codes can be then applied for the systems in System Type Manager.

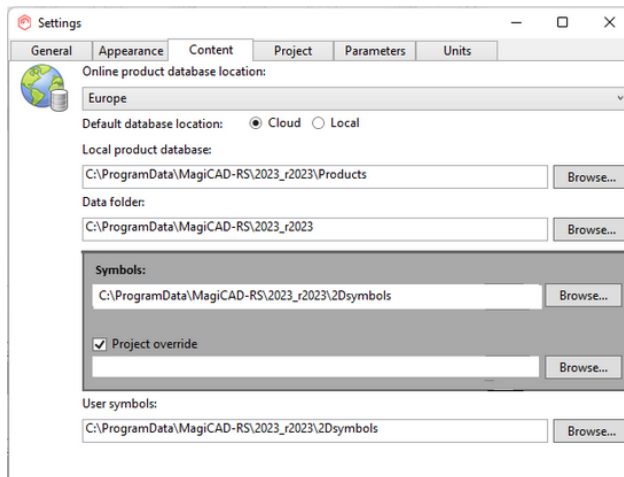


### Project override for 2D symbols

Project override for 2D symbols. MagiCAD has used server location for Symbols, which is usually write protected.

Users working on multiple projects need to have a way of creating project specific symbols.

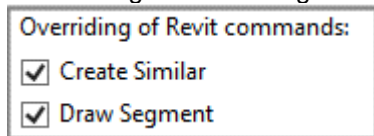
Project override / extensible storage path has now been added.



### Revit command override is now set as default by the installer

MagiCAD version 2023 UR-1 introduced the possibility to override segment drawing and create similar methods of Revit by MagiCAD's own methods.

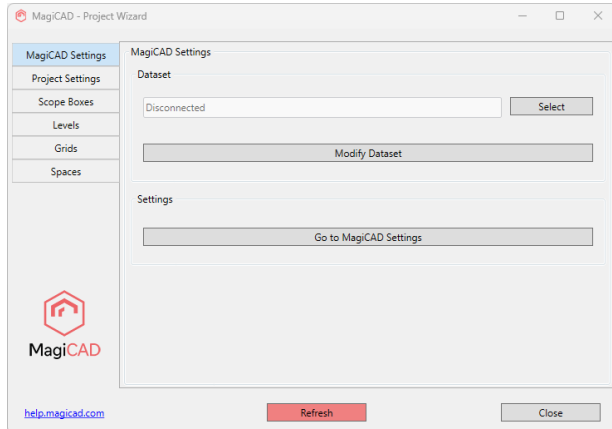
This setting can be changed in MagiCAD's setting dialog



Revit command override is now enabled by default in the new installations, while upgrade installations will still be using the existing settings.

## Project wizard - with settings for project setup, levels, grids, scope boxes and spaces

The Project Wizard tool collects all the needed data for setting up a new project into one place. Project data, such as levels, grids, scope boxes, and spaces, can be copied to the tool directly from a linked model. You can then view and modify the data in a list view, reducing the need to use Revit schedules.

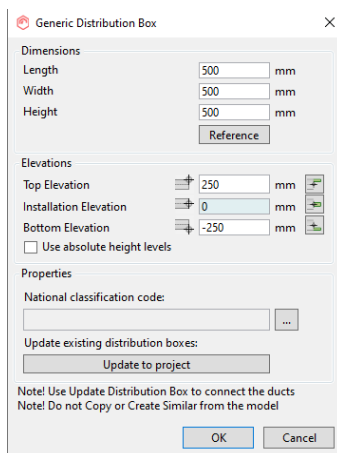


## Creating own zoom function for Clash and BWO reports etc.

MagiCAD Show element function lets you search and filter for a suitable view when Revit is unable to find one. Sometimes Revit is not able to find a suitable view that allows you to see the exact elements you want and finding a suitable view manually can be difficult and time-consuming. The new Show element function lets you search and filter views to easily find the correct one to use. The Show element function is a useful addition to many commonly used MagiCAD functions, such as Clash detection, Clearance analysis and Provision for builderswork openings.

## Reference height and size to generic distribution box

It is now possible to inherit size from another distribution box or from the duct. Additionally, it is possible to inherit elevation from another object.



**2D symbol requirement removed from some of the objects**

For some of the objects it is not best solution to use 2D symbols. It is now possible to leave 2D-symbol unselected for some more object categories. Additionally it is possible to remove 2D symbol from these category objects as well. If 2D symbol is not selected, it uses 3D geometry of that object in all view detail levels.

- Ventilation -> Other component
- Ventilation -> Air handling equipment
- Piping -> Fan coil unit
- Piping -> Other component
- Piping -> Drainage device
- Piping -> Manhole & roof drain
- Piping -> Drainage component

**National Classification Code improvements**

It is now possible to import, export and copy National classification codes. Added possibility for applying the code for generic manhole, generic distribution box and provisions for builderwork openings.

**Support for Fireseal product class in MCREV**

Support for Fire seals added to most of MagiCAD's functionalities. Installation functionalities not supported. Added support for Revit 2024  
MagiCAD now supports Revit 2024.

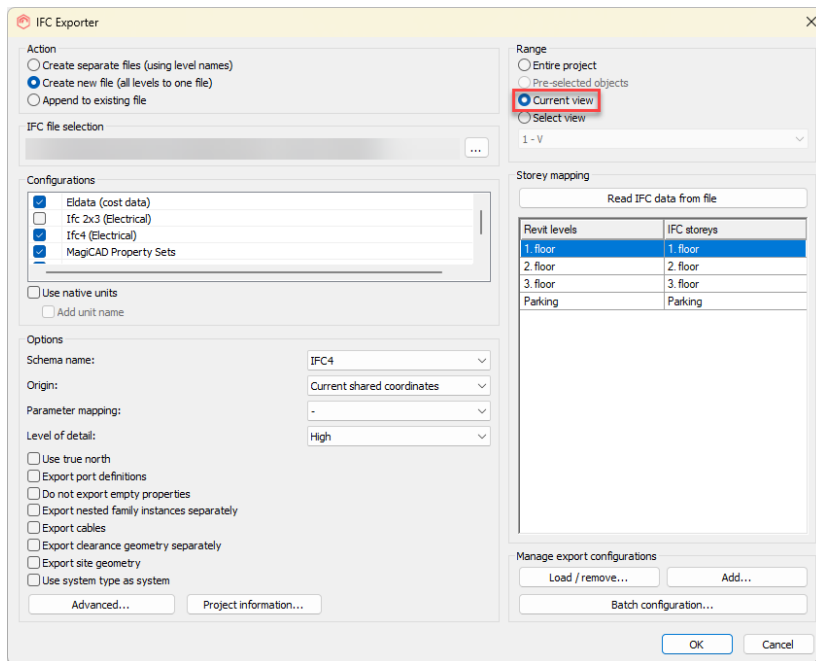
## 1.2 Common / IFC-related

### IFC Batch Export "Current view" updated to work in a different way than in earlier versions

Now "Current view" in IFC Export dialog and saved configuration means that the currently active view will be exported.

Earlier it was the current view which was active when the export configuration was saved, which was exported, but now only what is the active view when the export is run matters.

This also includes when a Scheduled IFC Batch export is run, meaning that the view which opens when the project opens, is the one which is exported.



### IFC Batch export can be run without dialogs

A new DWORD "RunIFCSilently" can be set under Computer\HKEY\_CURRENT\_USER\Software\Progman Oy\MagiCAD-RS\2024\_r2022 which suppresses the IFC Batch dialog which was implemented in MCREV 2023 UR-2 and it is not opened, so that the function runs immediately when the button is pressed, like in previous versions.



### 1.3 New features for heating, piping and ventilation

#### Calculation of VAV systems

Variable air volume (VAV) systems adjust the airflow of ventilation systems based on the demand. They are effective in reducing energy-use in buildings where the occupancy varies greatly throughout the day, such as in commercial buildings. In order to design variable air volume systems effectively, you need to be able to simulate different usage scenarios to ensure that the system will operate as planned.

It is now possible to define and calculate variable air volume (VAV) systems in MagiCAD. You can define up to three different airflow rates—for example low, medium, and heavy—for air terminals and assign the air terminals to zones that combine similar spaces together. The airflow rates and zones can then be used to build schedules, which simulate different usage situations, such as a full office with meeting rooms in use or an empty office at night.

#### Duct series updater to support reverted sizes

It is now possible to enter reverted sizes to the rectangular duct series in the "Duct Series Updater" tool.

By using this, it is possible to create size calculation with the reverted sizes which will reduce the manual sizing work on the segments if for example width restrictions have been used.

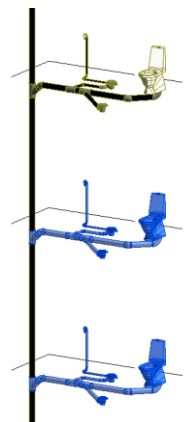
Reverted sizes means that e.g. sizes 600x200 and 200x600 can be entered.

#### Option for adding BWO size range within the duct/pipe series updater

BWO size range added to duct and pipe series updater dialogs.

#### Copy branch to selected levels

The copy branches to levels functionality has been added to copy branch tool. Copying branches between levels saves considerable time and effort when a project has repeating layouts on multiple floors. The branch is automatically connected to the riser on the new level or it can be placed freely without a riser connection. The existing rotation options are available also when copying to a new level and copied branches include all the data of the original branch.



### Improvement to Substations

It is now possible to set the pressure drop for each circuit in the substation separately. Earlier it has been possible to set only the pressure drop of the primary end secondary heating systems, but it has not been possible to set a separate pressure drop for domestic water systems.

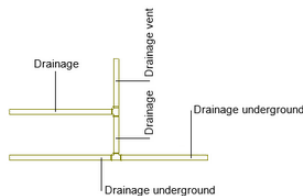
It is also possible to set a pressure drop of second and a third primary system e.g. for accumulator tanks that are charged with solar panels and/or geothermal heat.

If the pressure drop is defined in the manufacturers data, it is not possible to override it.

### Drainage flow calculation to support multiple systems

Calculation of drainage network supports now multiple connected system names if they belong to the same system type.

But it doesn't yet support connection between different system types.



### Connection points for water devices should be taken from qmodel

When adding domestic water devices to the dataset, user can now, as a complement to previous versions of MagiCAD, select to use the real connection location of that product. If the user check the box "Use real connection points", the "Connection direction" dropdown menu will be disabled and as soon as a 2D-symbol is selected, user will be given some extra options of setting the distance X and/or Y of the 2D-symbol relative the product.

### Continuation of UNE (Spanish) domestic water calculations

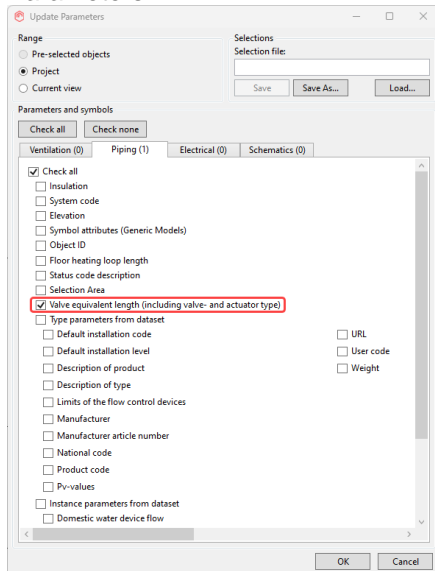
Changed the logic of the calculation of the hot water route lengths. Warnign of too long distance is now given also if there is no circulation points.

Added warning of too low temperature for the networks where there is only one circulation point.

In case there is no circulation pipes in the network, circulation view is now disabled. In earlier version, an empty report was shown if circulation was selected.

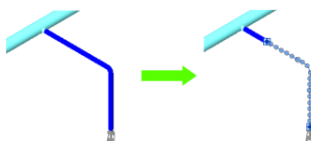
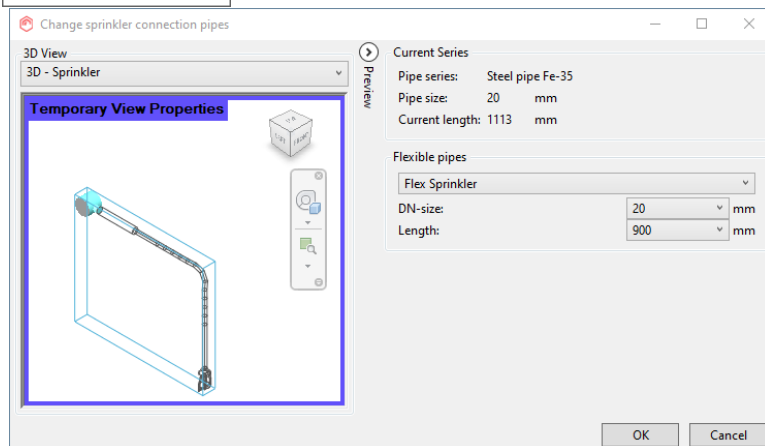
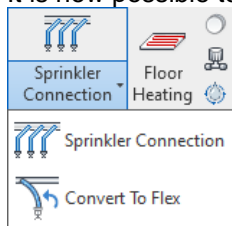
## Update equivalent length/valve type/actuator type with Update parameters

It is now possible to update valve equivalent length, valve type and actuator type with Update Parameters.



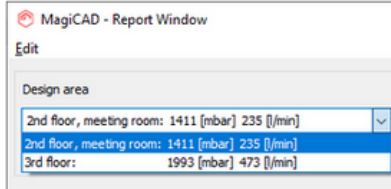
## Converting a rigid sprinkler connection pipes to a flexible pipes

It is now possible to convert rigid sprinkler connection pipes to flexible pipes.



### Add flow to the combo box in the report for design areas

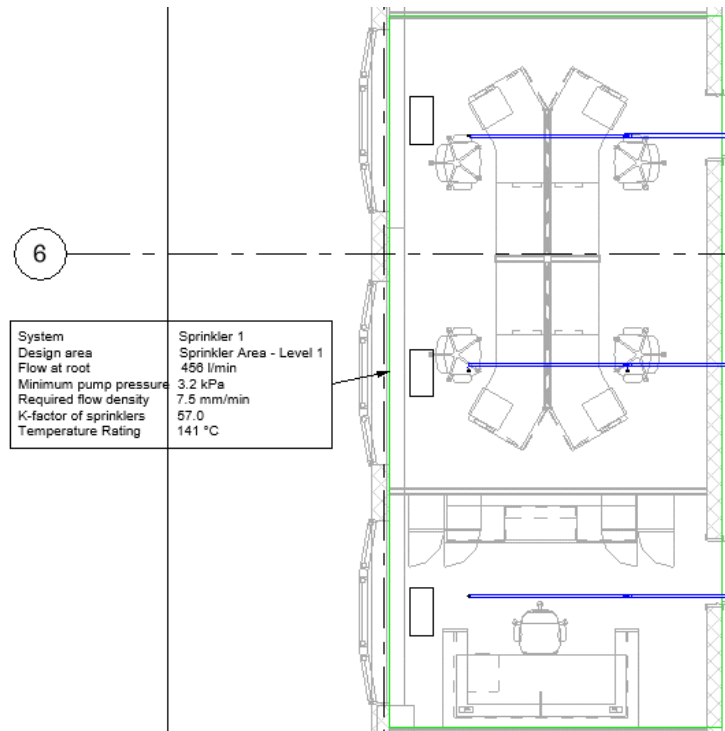
Fluid flow has been added to the combo box in the report. Also the layout has been improved by adding tabs between the fields to increase readability.



### Export calculation data for the sprinkler area

Shared parameters listed in the mechanical part of the properties window in the image below are added to sprinkler design areas. For example, "MC Temperature Rating" shows all different temperature ratings which are used in sprinklers in the design area. This helps tagging of sprinkler design areas.

Mechanical	
MC Flow at Root	456.42
MC Min Pressure at Root	3.16847 kPa
MC Temperature Rating	141 °C
MC k-factor	57.0
MC Sprinkler Required Flow Density	7.5 mm/min
MC Minimum Required Pressure L...	0 mbar



## 1.4 New features for electrical


### Report in the Import Network tool

Now when using the Import Network function, you will get a report of what has changed. In the report you will see all parameters from all switchboards and circuits which are included in the imported xml file.

You can filter the list so that only switchboards and circuits which have changes are shown, or you can decide to show only the elements which are in the imported file but are missing from the project.

Red colour in the list of switchboards means that some parameter values under them have changes and blue colour means that a switchboard is missing.

Red colour in the parameter list marks all changed values or if some value is missing from the xml file. If a circuit has been removed from the project, then all the parameter values of that circuit are missing.


**Import Report**

**Totals**  
 Changed elements: 2  
 Unchanged elements: 70  
 Errors: 412

☐ Show only changed elements
 ☐ Show only missing elements from the project
 

■ Changed attribute
 ■ Missing panels

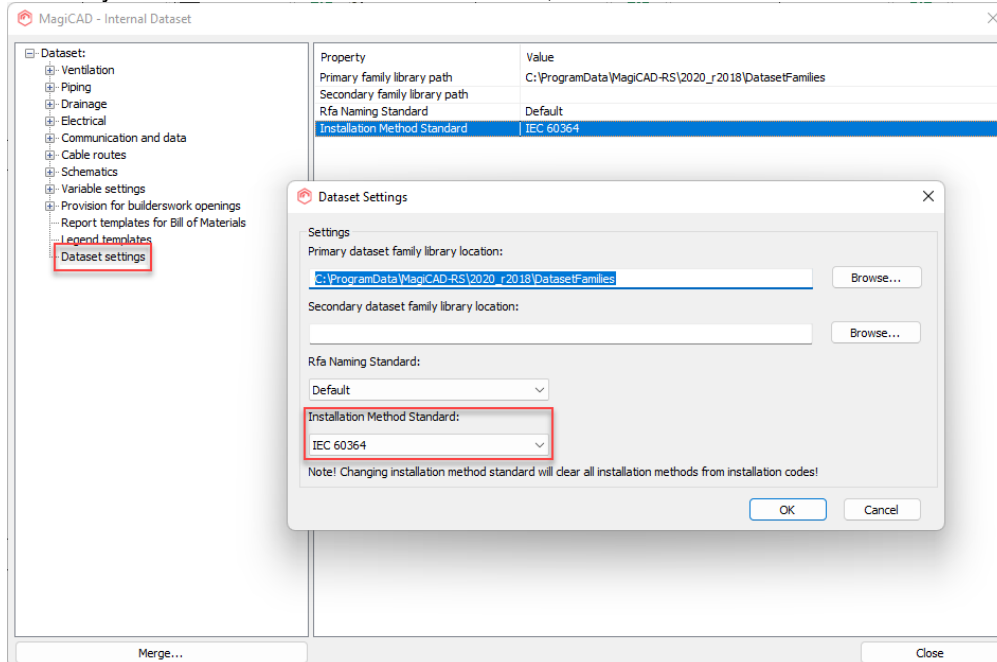
PD	Short-Circuit Current	Wire Type		MC Phase Conductor Material		MC PE Conductor Material		MC
		Original	New	Original	New	Original	New	
MP1	5000							
SP301	1190	MMJ-HF 3x2,5 S	MMJ-HF 3x2,5 S	Copper	Copper	Copper	Copper	Halogen-fre
UPS1	0	MCMK-HF 4x35+16	MCMK-HF 4x35+16	Copper	Copper	Copper	Copper	Halogen-fre
SP401								
	600	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	420	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	420	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	450	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	530	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	600	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	470	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	570	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	120	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	140	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	300	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	420	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	200	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	130	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	180	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	430	EQLQ-HF 3G1,5	EQLQ-HF 3G1,5	Copper	Copper	Copper	Copper	Halogen-fre
	1760	EQLQ-HF 5x2,5	EQLQ-HF 5x2,5	Copper	Copper	Copper	Copper	Halogen-fre
	380	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre
	720	EQLQ-HF 3G2,5	EQLQ-HF 3G2,5	Copper	Copper	Copper	Copper	Halogen-fre

Accept changes

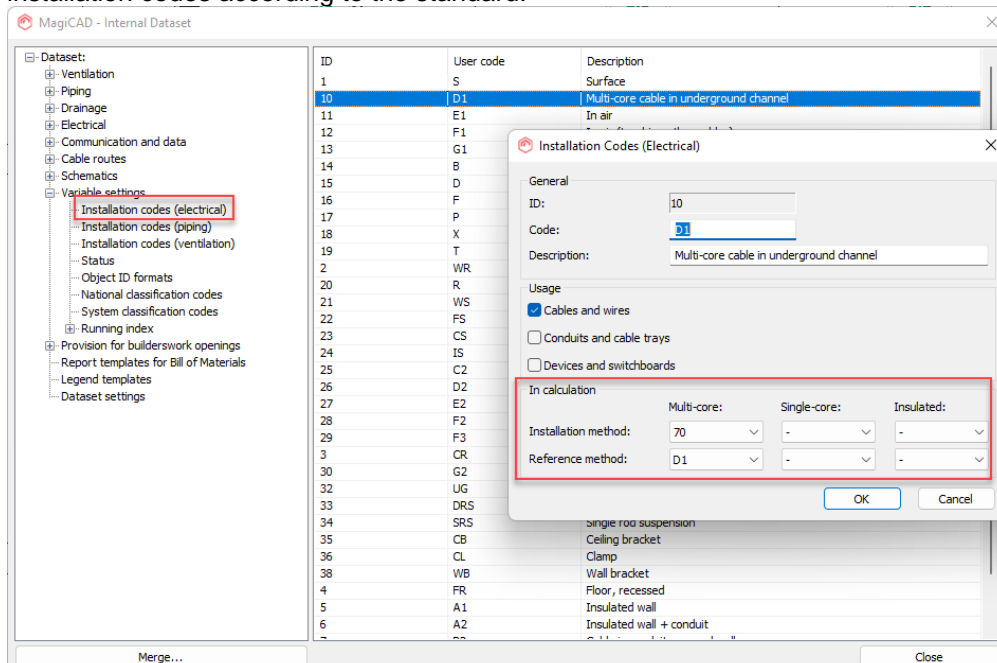
Reject changes

## Installation method standard selection

From the Dataset Settings you can select which standard will be used for installation methods. Currently selectable standards are IEC 60364, CEI 64-8 and NFC 15-100.



After selecting a standard, you can define the installation methods and reference methods to your installation codes according to the standard.

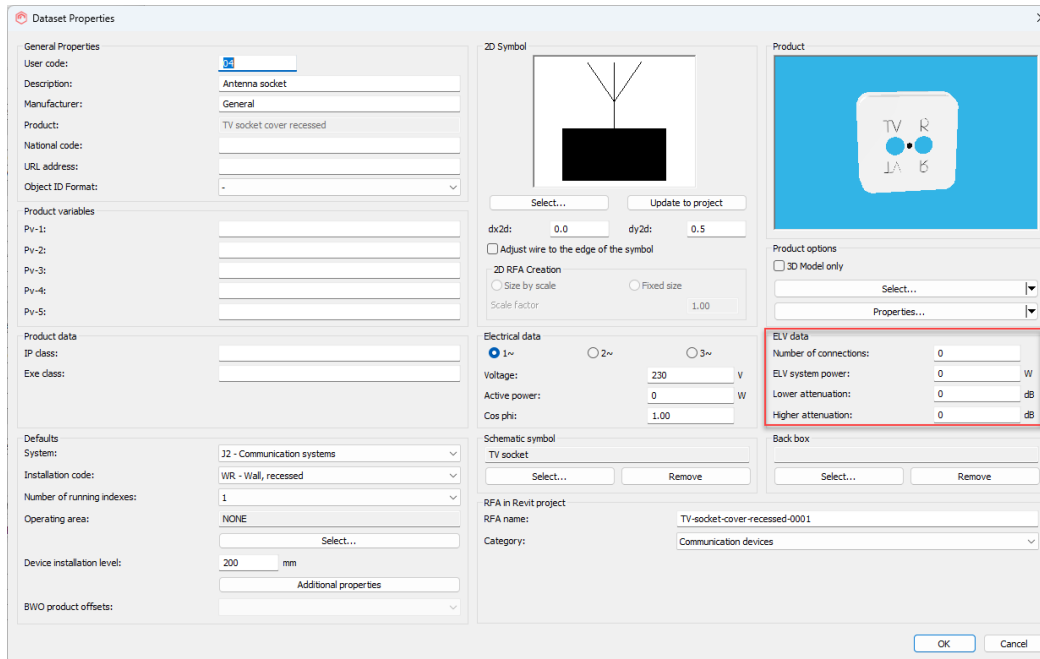


When using cable installation codes which have installation methods defined, the values are written to the MC Installation Method and MC Reference Method parameters of circuits.

Also, when using the Set Circuit Properties function to define the number of trays or number of additional touching circuits, the lists are now filtered based on selected installation method.

## New ELV parameters for devices and circuits

New parameters have been added to ELV devices which can be defined in the dataset:



New parameters have been added to power devices which can be defined in the dataset:

- MC Number of connections
- MC ELV system power

New parameters for circuits and panels:

- MC Total Number of Connections
- MC Total ELV System Power

Update Parameters will summarise the number of connections and ELV system power from devices to circuits and from circuits to panels.

Lower and higher attenuation parameters were added for future usage.

### Possibility to define wire/cable dimensions in circuits

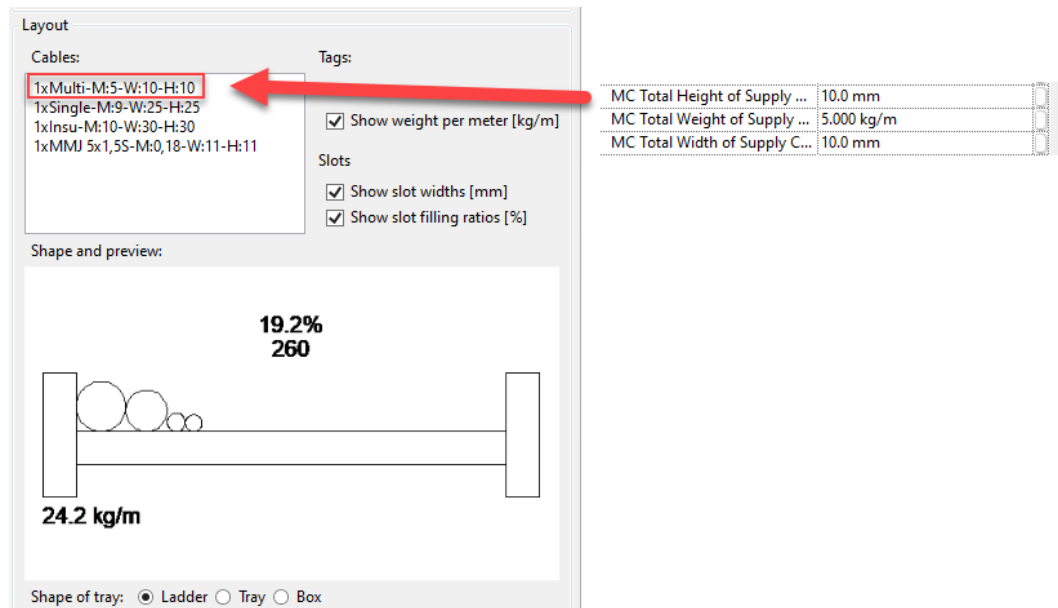
New parameters have been added to circuits:

MC Total Weight of Supply Cables (weight/meter)

MC Total Width of Supply Cables (length)

MC Total Height of Supply Cables (length)

When these parameters have values, they are used instead of wire type parameters in cable packets and cable layouts.



The screenshot shows the 'Layout' window in MagiCAD. On the left, under 'Cables:', a list of cable types is shown. The first item, '1xMulti-M:5-W:10-H:10', is highlighted with a red box and a red arrow points to it. To the right of the cable list, there are checkboxes for 'Show weight per meter [kg/m]', 'Show slot widths [mm]', and 'Show slot filling ratios [%]'. Below these is a 'Shape and preview:' section showing a diagram of a cable tray with dimensions '19.2%' and '260'. At the bottom left of the preview, it says '24.2 kg/m'. At the bottom of the window, there are radio buttons for 'Shape of tray: Ladder', 'Tray', and 'Box'. On the right side of the window, a table summarizes the circuit parameters:

MC Total Height of Supply ...	10.0 mm
MC Total Weight of Supply ...	5.000 kg/m
MC Total Width of Supply C...	10.0 mm

### New parameters to the Export/Import Network functions

The following circuit parameters have been added to the Export/Import Network functions:

- MC Description 1 (now also included in import)
- MC Description 2
- MC Description 3
- MC Circuit Number
- MC Circuit Type (is only exported)
- MC Cable Description
- MC Max Cable Length
- MC Protective Device Description (now also included in import)

MC Cable Description is a new parameter where to duplicate the imported wire type and thus store the latest one selected in the calculation software regardless what you have set as the circuit's wire type in Revit. The imported wire type will be set also as the circuit's wire type but only if you have a corresponding type in the project which name is exactly the same as the imported one. From the cable description parameter you can always check what you had selected in the calculation software during the previous transaction.

MC Max Cable Length is a new parameter which value can be imported from calculations to know the maximum allowed cable length when using the selected protective device and wire type.



### Maintain annotation orientation in electrical equipment and lighting fixtures

Added support for the Revit native "Maintain annotation orientation" parameter in "Electrical Equipment" and "Lighting Fixtures" categories. When generating face based families into these categories, the option is set on. This way the annotation symbols in the face based products will be visible also on vertical or sloped faces.

NOTE! This is supported in Revit 2022 and newer. With Revit 2021 you should get a notification about annotative symbols not being visible when installing product on vertical or sloped faces.

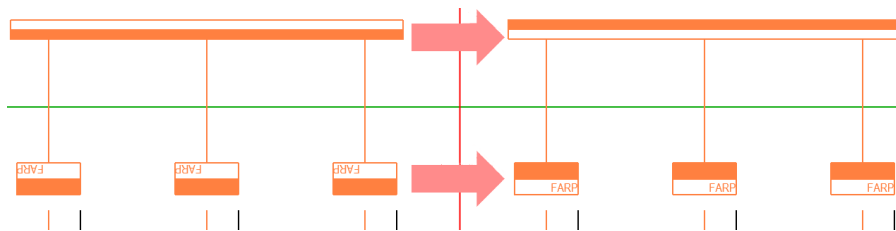
## 1.5 New features for schematics

### Schematics - Manage device group dialog improvement

Manage device group dialog has been updated to show all device groups in project and setting to hide empty categories from the list.

### Symbol directions in automatic riser diagrams which are generated from top to bottom

A new option has been added to both the Main Riser Diagram and ELV System Diagram for allowing you to decide whether the 2D symbols maintain their base orientation or not. This way, when drawing a schematic from top to bottom, the 2D symbols will not be rotated/mirrored.



## 2 Resolved issues

### 2.1 Common

#### Duct and pipe drawing writes insulation information also to installation parameter

MC Installation Code	EI60
MC Insulation Code	EI60
MC Object Variable 1	

Corrected an error where the insulation code was written also to the MC Installation Code parameter.

#### Legend tool unexpected error

Unexpected error appeared when creating a legend and "Delete all existing data and add new legend table to existing view" option was used.

This is now corrected

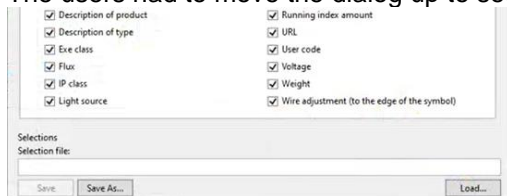
#### Angle to Horizontal did not set Installation Code or Object Status even if they are set in the settings

Angle to horizontal is now using settings for "Installation code" and "Object Status"

#### Dialog visibility problems have been corrected

"Update Parameters" dialogues was constantly shown so that the OK and Cancel buttons were hidden below the visible area.

The users had to move the dialog up to see these buttons.



Height of the "Update Parameters" dialog has now been changed so that the dialog does not stretch below the visible area of the screen.

#### "Options" in duct/pipe/tray drawing toolbar sometimes crashes

There has been some problems when clicking "Options" button in duct/pipe/tray drawing toolbar. The floating toolbar is closed and nothing happens.

After "Options" is opened from the dropdown menu then it starts to work again from the ribbon as well.

This issue has been corrected.

#### Unnecessary product remains in dataset

When a new product is started to be added to the dataset but the operation is cancelled, the product is loaded to the dataset anyway.

In this case the product is not shown to the user but this leads to two problems

The size of the dataset increases unnecessarily

When a product which is already in the dataset is tried to be loaded to the dataset with "MagiCAD Connect", it cannot be done, since MagiCAD thinks it is already in the dataset.

This is now corrected.

**The "Level" option did not work correctly in the Selection filter**

Selection filter sorting by level is now working correctly.

**MagiCAD's change system creates open ends to sprinkler network**

MagiCAD's change system created open ends to the sprinkler network. This means that the objects were no longer connected after change system was used.

Change systems no longer disconnect object.

**3D-images are lost in the legend when reopening a project**

Correction to legends issue with 3D-images to disappear when project is saved and reopened.

3D-images were linked to the project and they disappeared when the image was deleted from disk.

Now the images are imported and saved to the project.

## **2.2 Common / IFC-related**

**Duplicate IFC GUIDs in Revit 2023 are recreated by MagiCAD**

Autodesk has changed IFC GUID generation in Revit 2023. Now all components get IFC GUID already during installation. However for instance if a pipe is then split or a branch is created from the pipe then new GUID is not generated for the "main" segment which leads to multiple segment with same GUID.

Now MagiCAD also generates new GUIDS for the duplicated GUIDs saves them back to elements during IFC export.

## 2.3 Resolved issues piping and ventilation

### Sprinkler calculation creates open ends to network - calculation slow

In version 2022 UR-2 we added possibility to change the pipe size in the sprinkler report. As a consequence all the pipe sizes were read from the calculation and updated to Revit project. This led to slowness in big projects and also to some errors where the pipes were disconnected. Now only the pipes whose sizes are changed are updated to the project and this increases the performance in the big projects. Also the disconnections doesn't happen as often. However, if there is no space for the fitting, Revit disconnects the pipe from the fitting, which would happen anyway if you would change the pipe size with revit command.

### Error in equivalent length table in the sprinkler report

If the size of the flexible hoses were the same, only the first length found was shown. Now all the different lengths are shown

Spr fix-20	20/2000	2.25
	20/1000	1.25

### A warning "product not available" was given in duct sizing even though correct sizes were in the database

The search assumed that the sizes were given in increasing order. This is corrected by searching all the sizes before giving the warning.

### Mixed system configuration error

Fixed system checking in cases when there is water heater between water device and venturi loop. Venturi loop calculation assumed that all the connected devices are same system type, but water heater made this assumption to fail.

### Some correction to domestic water calculation if Danish standard used

The continuous flow was added twice to mixing valve.

The pressure drop of the pipes next to the fire hydrants was not calculated.

Pressure drop was not shown for fire hoses in Danish domestic water calculation.

The pressure drop for fire hoses was calculated correctly when Danish domestic water standard was used, but the result was not shown in the report

General results														
Product	Size	L [m]	Insulation	qv sum [l/s]	qv max [l/s]	qv fire [l/s]	qv dm [l/s]	v [dm/s]	dp/L [Pa/m]	dp flow [kPa]	K factor	dp Hat [kPa]	pt [kPa]	Warrn
MAGI-FE-76	76	1.1		6.50000	0.15000	1.34000	1.73570	0.43	55.9	0.062			126.426	
MAGI-FE-T1-7	76/54			6.50000	0.15000	1.34000	1.73570	0.43	0.090	0.000		-0.559	126.364	
MAGI-FE-54	54	0.7				0.67000	0.67000	0.33	54.1	0.037		-6.798	126.833	
MAGI-FE-B1-5	54					0.67000	0.67000	0.33	0.027	0.494		-0.530	133.554	
MAGI-FE-54	54	0.7				0.67000	0.67000	0.33	54.1	0.040			134.057	
MAGI-FE-B1-5	54					0.67000	0.67000	0.33	0.027	0.494		0.530	134.017	
MAGI-FE-54	54	0.2				0.67000	0.67000	0.33				1.607	133.461	
Fire hose 20/1000	20					0.37000							1316.223	103
MAGI-FE-76	76	1.1		6.50000	0.15000	1.34000	1.73570	0.43	55.9	0.062			126.364	
MAGI-FE-T1-7	76/35			6.50000	0.15000	1.34000	1.73570	0.43	0.090	1.000		-0.559	126.301	

No dp (flow) for fire hoses

### Standard Connection doesn't show all possible angles

Due to the error in program code change in MagiCAD version 2023 UR-2, not as many solutions was shown in standard connection than in earlier earlier versions.

This is corrected

### Sprinkler connection tool exceptions

Corrected an error which occurred when the sprinkler was connected with flexible pipe.

The error occurred when the length of the pipe was changed and the connection was updated either by clicking the update button or "Option details".



### Ventilation balancing freezes "Not responding"

In some situations ventilation balancing freezes without any warning and it is stucked into eternal loop. Reason for this was in function that tries to find thickness of lining for t-branches from the neighboring ducts.

Freezing happened randomly when next part from tap/t-branch is not a duct (duct to union tool had been probably used).

This error has been in MagiCAD version since 2022 UR-2.

The error is now corrected.

### Incorrect warning "Inconsistent diversity" in gas calculation

Gas calculation sometimes gave "Inconsistent diversity" warning, even though diversity is Ok. This was due to internal roundings and comparison of values.

This has been corrected by adding a margin to comparison statements to avoid the rounding errors.

### It was not possible to select "Use radiator connection size" in "Select Valves" during the installation of the radiators

"Use radiator connection size" option enabled in valve selection for radiator installation.

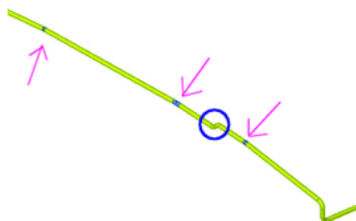
### z

This error happened when flexible pipes are directly connected to rigid pipes so that there are no fittings between the pipes.

The objects shown with arrows are short pipes which are defined as flexible. They represent "small bends" which cannot be done in Revit.

The error happens when there are actual bends, shown with the blue circle, between the direct connections.

This error is now corrected.



### Height and width parameters for a rectangular sprinkler operation area are swapped

When sprinkler operation area is set to rectangle in the dataset with different width and height values, the height and width are swapped when the sprinkler is installed.

This works correctly now.

Operation Area	
Bounded area on placement	<input type="checkbox"/>
Rectangular Operation Area Height	3000.0 mm
Rectangular Operation Area Width	5000.0 mm

### Selecting a symbols for a silencer was not working correctly

It was possible to select symbols for some silencers to which the selection should not have been possible.

Symbol selection works correctly now.

### Move/Copy Branch with Free placement disconnects each return valve from radiators

Move/Copy branch function disconnects each return valve from the radiators if the copied branch is placed in the free place.

When the copied branch is connected to the pipes, it works as expected.

This works correctly now

### Flange code on T-branches with reducers was not working correctly

If the user code of a flange is changed to something else, the old code still appeared for fittings in some cases. In such cases, the user had the redraw the fitting in order to get rid of the old codes.

When sizing is run, the calculation report shows the correct code but after updating the old appears to the instance parameters. Production model updater didn't help either.

The reason why the flange codes were not updated correctly was related to the transition parts, which are directly connected to the T-branches.

This is now corrected and a correct flange codes are shown.

### Sprinkler installation to end of the vertical pipe was not working

Sprinklers can now be installes at the end of the vertical pipe rather than at projected point.

Also behaviour when installing at the end of a horizontal pipe has been changed so that the sprinkler is installed to the end of the pipe rather than at the shown point.

Earlier the shown point shortened the pipe.

### Manage running index is empty for fan coil units

When runnig indexes are set for the fan coil unit, these indexes don't appear in Manage Running Index -tool. The tool seems to recognize that indexes are there, but the list stays empty.

The problem was related to the phase of spaces. When data of the elements is collected, the space of the fan coils are in different phase, and therefore unavailable.

The whole element is then discarded after the space data reading fails.

Element phase data reading is now changed. In a scenario when the phasing of element and the space are not matching, the space data will be shown as empty.

## 2.4 Resolved issues electrical

### Middle alignment goes wrong with texts in symbols

When the vertical alignment of a text in a symbol was "middle", the text was not in correct position.

### Conduit causes error when conduit type standard is missing

When a conduit type standard had been removed from the project, the conduit drawing tool gave an error. Now you can no longer select a conduit type where the standard is missing.

### Single phase switchboard creation problem

When creating a single-phase switchboard, the distribution system was not set for the switchboard. Now the selected distribution system (if valid) is properly set for the switchboard.

### Error in Connections to Mechanical when using "Zoom" onto missing host object.

Zoom now works even when the host element is missing.

When a project doesn't have any 3D views, the preview now creates a temporary 3D view.

View selection now works also when the project has been changed during the Revit session.

### Wiretype reading problem for ELV circuits

Wire type of ELV circuits were incorrectly read from the Wire type parameter in certain cases. Now it is read correctly from the MC ELV Wire Type parameter in all cases.

### Adding a modified tag and drawing a wire caused an error

If a wire tag was open in the family editor and it was used in wire drawing, you got an error. Now you should get a notification that opened tags cannot be used before the family document is closed.

### Import Network failed in case "circuit number" did not match

Circuit number check has been removed from the Import Network function. It now checks circuits and panels only based on GUIDs.

### Bugs in Export Network

Unit (A) added to Rating parameter

"MC Max L-G Short-Circuit Current" parameter's default value is 0 when the parameter is added to the project.

### Cable packet start point error coming from unions in regular conduit systems

Cable packet unions (and cable packets) are identified now by checking if unions in conduit networks contain electrical connectors. Update Parameters should not give "cable packet start point not defined" warnings anymore for conduit systems where unions do not have electrical connectors.

### Symbol update removes mapping of "Show unbounded operation area"

When changing the 2D symbol of a product in the dataset and then using the "Update to project" button for updating it to the project, it no longer clears the parameter mapping of "Show unbounded operation area".

**Width and depth were swapping in dataset properties of switchboards**

The default values of width and depth for switchboards in the dataset were swapping when opening their data sheets.

**2.5 Resolved issues Schematics**

No resolved issues